Informal and formal learning and the pursuit of environmental education in young children: the role of Forest School

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‘I, Suguna Nair, confirm that this research study and the work presented in this thesis are my own. Where information has been obtained from other sources for the purpose of this study, appropriate references have been made in the thesis.’

Signed:

Abstract

The continuing conflict between formal and informal education processes has many scholars divided in relation to the impact on learning and learner development. Though formal education, often characterised as ‘traditional’, usually has a distinct, set boundaries and curriculum ‘subjects’, whereas informal education spans from adventure and discovery activities to field work with the emphasis on holistic ‘experience’. Formal education focuses on specialist subject knowledge whilst informal learning can potentially nudge learners to take risks and inform themselves through their own experiences. When it comes to environmental education, informal learning occurring outside the classroom and possibly in natural environments claims to connect learners to nature and its elements in a manner that is elusive to formal education occurring within classrooms and laboratories.

This research focuses on the dissimilarities between the formal and informal education in interest of environmental education through the case study of Forest School. Forest School, as a concept, exposes young learners to the natural at regular intervals and allows them to learn through experiences and child-led and initiated activities. This study examines through case study techniques Dewey’s notion of experiential learning and ways in which this is valued by various participants. Through participatory observation, photographs and interviews of children, practitioners, school teachers and parents, this pilot study has endeavoured to establish a relation between formal and informal learning, with the focus on environmental education.

This study has prompted discussions on the potential of Forest Schools to further raise environmental sensitivity and awareness in children. In the event of incorporating Forest School into formal education, the concept may have to change the manner in which it is perceived, designed and organised. This is to be regarded as a pilot study which has the potential to grow into a research with data generated from a larger sample to pave way to a well-organised and multi-disciplinary environmental education.

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Impact statement

This research aims to contribute to the wider discussion on effective environmental education. With the current need in environmental consciousness and sensitivity in individuals across the globe and therefore to take appropriate actions, education plays an important role in bringing about this desired change. The study explores the relationship between formal and informal learning to facilitate environmental education in primary school. The focus is on young children who are more amenable and open to their experiences and learning. When exposed to frequent experiences in the natural environment, the likelihood of appreciating nature and its elements is high.

This research also aims to be a platform for further research in this area to influence the curriculum and educational policies across the world. I personally would like to work in the field of education innovation to take classroom learning outside with due time allocated to specialised knowledge within the classroom, to make learning interesting, ‘fun’ and in nature. My prime aim is to contribute to environmental and climate change education through learning outside the classroom and developing a sense of being one with nature. I intend to work with schools and government agencies to this effect.

Another significant impact of this research is to further build this work in countries like India where informal learning is still in its nascent stage. This could pave the way to a new, interactive, active learning experience for young children with added benefits to inculcating environmental sensitivity. The key element for this research to focus on is making environmental education multi-disciplinary in nature. Environmental education can be refreshed by taking various subject matters and extra-curricular activities outside the classroom and using natural elements such as rocks, fallen leaves and flowers where appropriate in activities of learning.

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Chapter One: Introduction to the study

1.1. Introduction

This chapter introduces my thesis and explains the rationale behind my choice of study. Section 1.2 presents my personal story. This includes an account of my professional history and interests, and the events that led to my choice of research topic, and the future I envisage with the completion of the study. Section 1.3 contextualises my research, while section 1.4 discusses the significance of the study in the field of environmental education and outdoor learning, further reviewing the genesis of environmental education across the world; especially through the focus on climate change and the UN strategies. I also introduce my research questions in this section, which will then be discussed further and answered in this study.

1.2. My story

During the completion of my bachelor's degree in Microbiology in India, I decided to shift towards a discipline which catered to my interest in nature catered to my love for outdoors. I completed my first postgraduate degree in Environmental Science and later a second postgraduate degree in Disaster Management. Between degrees, I worked as a teacher in two completely different school settings. The first one was a privately-run school, where I taught Science and Environmental Science for Years 7-10. I worked there for a year. The following year, I was employed to teach Year 1 at an international school. My experience at the international school made me think about learning outside the classroom. This resonated with my second postgraduate degree in a Social Science institute, in which I was introduced to the concept of community, gender equality, free thinking and being oneself.

I then went on to work with a charity in the area of disaster risk reduction in schools. I was given the opportunity to design and conduct workshops on climate change and preparedness for natural disasters. I contacted various schools in New Delhi, both private and public, and discussed the risks and hazards within and outside the school with teachers and students. I found working with children in government schools more satisfying. They usually came from economically less-advantaged backgrounds and lacked opportunities. Some of the teachers referred to them as 'children with low IQ'. However, when I spent time with them and made them feel valued, they showed interest and it warmed my heart. With the opportunity to design my own workshops, I could be as creative as I wanted to be and started giving more thought to outdoor learning in the interest of climate change education. To me, this meant enhancing young people's awareness and understanding of climate change and its implications in their lives, directly or indirectly. In India, direct implications are more apparent locally in terms of a very hot summer and a short monsoon in most states, which then gives rise to scarcity of water. Indirect implications are understood through national and international news on air and water pollution, natural disasters such as drought and floods, deforestation and extreme weather conditions. With an increase in natural and man-made disasters in India, discussions on climate change and its repercussions had taken the center stage in media, government, schools and charities. I started to wonder whether spending time outside the classroom would sensitise children towards the environment and its current needs, which led to the question: to what extent can formal education be linked with learning outside the classroom? I began to write lessons related to formal education and think about how I would conduct them outdoors. For example, in relation to lessons on the functions of the heart, I planned that I would ask children to run from point A to point B out in a park and then ask them to feel their own heartbeat, followed by a discussion on what they felt and why. I visualised lessons outside the classroom, and discussions while seated on the ground freely and in a relaxed manner. These ideas, of informal learning, intrigued me and I felt excited about an opportunity to conduct them someday.

With the pressure of an arranged marriage mounting on me, which I wanted to resist, I decided to do what would truly make me happy and therefore pursue a research degree to satisfy my curiosity about outdoor learning. Especially with no specific attention given to outdoor learning in the Indian education system, I was drawn further

into my ideas of education in nature and its implications on the intellectual capacity of young children. In my experience, education in India is mostly classroom based, a blackboard to notebook approach, except for the International Baccalaureate education system, which encourages outdoor learning as part of formal learning. Having experienced the difference in approach and observed the benefit in my Year 1 students I was even more intrigued. The academic year with Year 1 at the International School was truly lovely and filled with laughter. At the time, I was recovering from Meningitis, and my students helped me forget about my ill health and focus on the positives in life. They helped me heal. Furthermore, I also realised the potential impact of even casual conversations with young children, as they would recall my words later at some other time. Even though they did not seem to be paying attention, young children seemed more focussed, observant and attentive. Therefore, I decided to aim at studying the impact of less formal, outdoor learning in that age group. Even though I initially aimed at a PhD degree, I was unable to obtain a scholarship at UCL, and for several reasons, my study was interrupted. As a result, and with advice from my supervisor, I re-purposed my studies to MPhil in early 2017, adjusting the field area from India to London and from a full-blown action research project to a case study of Forest School. I hope that this work could serve as, or even be seen as, a 'pilot' study if and when I had the opportunity to return to this research.

The next section discusses the international context of my research topic. It focuses on the international discussion on environmental education aiming at sustainable education to create awareness of environmental problems.

1.3. Contextualising my research

One of the biggest challenges faced by humans in the 21st century is the enhanced greenhouse effect leading to global warming and climate change. This challenge extends to all facets of human existence; ethical, political, economic and scientific (Schreiner, Henriksen, & Hansen, 2005, p. 10). The Intergovernmental Panel on Climate Change (IPCC), in its report in 2001, clearly states that the Earth's climate is affected by human activities (Oreskes, 2004b).

“Human activities … are modifying the concentration of atmospheric constituents … that absorb or scatter radiant energy. … [M]ost of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations” (IPCC, 2001).

According to McCarthy, anthropological activities have led to increased greenhouse gases in the atmosphere. Various major scientific bodies in the United States whose members’ expertise directly relates to the matter have issued similar statements. For example, the National Academy of Sciences report, ‘Climate Change Science: An Analysis of Some Key Questions (2001)’, mentions that as a result of human activities, greenhouse gases are accumulating in Earth’s atmosphere and causing surface air temperatures and subsurface ocean temperatures to rise (NAS, 2001). Many other American organisations, such as the American Meteorological Society (AMS, 2003), the American Geophysical Union (AGU, 2003), and the American Association for the Advancement of Science (Oreskes, 2004a), have agreed in recent years that the ‘evidence for human modification of climate is compelling’[1]. As one of the tools to tackle the situation, a lot of emphasis has been given to environmental education in the recent years.

Recently, IPCC (Oct, 2018) suggested that the global temperature rise due to human activities should be maintained to 1.5 above the pre-industrial global temperature. If the temperature hikes above the 1.5 limit then the world will witness increasing natural disasters (IPCC, 2018)[2]. Also, “warming from anthropogenic emissions from the pre-industrial period to the present will persist for centuries to millennia and will continue to cause further long-term changes in the climate system.[3]”

IPCC is not alone in its conclusions. The International Energy Agency published in their Global Energy and CO2 Status Report that global emissions grew by 1.4% in 2017, after having been constant in the previous three years. This then states that the global emissions have reached a historic high of 32.5 gigatonnes (Gt)[4]. As Earth is

[1] http://science.sciencemag.org/content/306/5702/1686.full
[2] https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf
[3]https://www.ipcc.ch/site/assets/uploads/sites/2/2018/07/sr15_headline_statements.pdf
[4] https://webstore.iea.org/global-energy-co2-status-report-2017

being exploited for its resources with limited ecosystems, human beings tend to experience one disaster after another and hence a sustainable global development is increasingly becoming an apparent need[5].

Environmental education (EE) offers a long-term solution to environmental problems, in part (Evans, Gills, & Marchant, 1996). Since the late 1960s, governmental and non-governmental organisations have seen education as a key means for promoting environmental awareness and global responsibility (J. Palmer, 1998). According to the United Nations Educational, Scientific and Cultural Organisation (UNESCO), education and awareness-raising play an essential role in increasing the climate change adaptation and mitigation capacities of communities by enabling individuals to make informed decisions. Education helps learners understand the causes and consequences of climate change, prepares them to live with the impacts of climate change, and empowers them to adopt more sustainable lifestyles[6]. The onus, hence, lies upon today's students to understand the complex environmental issues and take informed decisions in their private and public lives (Metz, 2010).

Before it was generally realised that climate change was a threat to humanity globally, 'Our common future' (1987) directly correlated education and sustainable development for the first time in the international arena. However, there have been other networks established by the United Nations (UN) which have strived to bring education into the conversations around nature conservation and environmental policies. The International Union for Conservation of Nature (IUCN) was founded in 1948 to promote nature conservation and sustainable use of natural resources. It is involved in data gathering and analysis, research, field projects, advocacy lobbying and education[7]. Later, the United Nations Environment Programme (UNEP) was established in 1972 at the Stockholm conference (UN conference on the Human Environment) to aid in promoting environmentally sound policies and practices. The Environment Education and Training (EET) under the UNEP promotes attitudes and value systems that influence environmentally ethical behaviour by developing

[5] https://www.worldfuturecouncil.org/wp-content/uploads/2018/12/Talanoa-Dialogue.pdf

[6] https://en.unesco.org/themes/education-sustainable-development/cce
[7] https://www.iucn.org/about

understanding, skills and values that will enable people to participate as active and informed citizens in the development of an ecologically sustainable and socially just society[8]. Environmental education is considered a key factor in the achievement of sustainable development.

Environmental education can motivate students to change behaviour in a positive way and understand that they can have an impact on important local and global issues (Metz, 2010). According to Ehrlich (2011), people frequently fail to make connections between their individual actions and environmental conditions, and knowledge and values are crucial in understanding and addressing this human predicament. More recently, the UNESCO implemented Decade of Education for Sustainable Education (2005-2014) 'emphasising that education is an indispensable element for achieving sustainable development'[9]. The vision of Education for Sustainable Development (ESD) is a world where everyone has the opportunity to benefit from quality education and learn the values, behaviour and lifestyles required for a sustainable future and for positive societal transformation[10]. Of course, formal education provides a cognitive backdrop to this vision of awareness, which includes knowledge of how environmental, political and social systems work. Taking into account that over 80% of the world's population now is formally schooled, this must have a profound effect on the manner in which individuals process and utilise information made available to them constantly (D. P. Baker, 2014). Therefore, the efforts by the UNESCO and other organisations to promote environmental consciousness have the potential to create an additional impact on how individuals understand the implications of their actions on the environment. In the year 2015, the United Nations General Assembly set 17 sustainable development goals. These goals came into force on January 1st, 2016. Countries have agreed to end all forms of poverty, including fighting inequalities and climate change by the year 2030. These goals include:

1. No poverty
2. Zero hunger
3. Good health and well-being

[8] http://web.unep.org/training/who-we-are/about-environmental-education-and-training
[9]http://www.education4sustainability.org/2013/02/06/the-un-decade-of-education-for-sustainable-development/
[10]https://en.unesco.org/themes/education-sustainable-development/what-is-esd/un-decade-of-esd/mission

4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reduced inequalities
11. Sustainable cities and communities
12. Responsible production and consumption
13. Climate action
14. Life below water
15. Life on land
16. Peace, justice and strong institutions
17. Partnerships for the goals

Considering the amount of prominence given to education to tackle environmental degradation and climate change, I am hoping that my research will shed light on the enquiries surrounding school curriculum, outdoor learning and personal development of pupils with respect to environmental awareness. Though I will discuss further environmental education and its significance in the next chapter, I will now move on to highlighting the significance of my research, the possible outcome and the intended audience. More importantly, my research questions are introduced in the next section.

1.4. Significance of my research

In 2004, minutes before the Indian Ocean tsunami struck a beach in Thailand, a ten-year-old British girl warned the tourists along the beach about the tsunami and saved 100 lives. She learnt about the early signs of tsunami in her Geography lesson two weeks before she left for her holiday. Coincidentally, this story was featured in every workshop I delivered on climate change while working in New Delhi. Tilly Smith's well publicised (Owen, 2005) story appeared to reaffirm the power of education with respect to nature and its elements in the world. With the increase in natural disasters

across the world, especially, attributed to the phenomenon of climate change, education in this case and hopefully in many others has made and will make a difference.

Even though currently there are remnants of political debate around whether or not climate change is real, as mentioned before, in 1987, the World Commission on Environment and Development published ‘Our common future’, which first linked sustainable development (SD) with education (Jickling & Spork, 1998). Since then, various countries and international organisations have supported education and SD via different programmes (Jickling & Spork, 1998). Countries such as Canada (McKeown & Nolet, 2013) and Australia (Fein, 2004) developed platforms to build sustainable education.

According to Hungerford and Volk (1990), ‘the ultimate aim of education is shaping human behaviour’ and they vehementlaly support achieving ‘change in learner behaviour’ as the aim of environmental education. In 1992, according to Agenda 21 discussed at the UN Conference on Environment and Development in Rio de Janeiro, education is the key to endorse and instill sustainable development and attitude in people.

> “Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. Both formal and non-formal education are indispensable to changing people’s attitudes, so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making. To be effective, environment and development education should deal with the dynamics of both the physical/biological and socio-economic environment and human (which may include spiritual) development, should be interrelated in all disciplines...” (UN, 1993, p. Chapter 36.33)

Finger (1994) states that experiences in nature have proven more effective than environmental awareness, information or value orientations resulting in a better

predictor of environmental behaviour. In the last 30 years, researchers in the field of environmental education have been investigating the factors that will promote 'pro-environmental behaviour' (Courtenay-Hall & Rogers, 2002). Since, environmental issuses have far reaching consequences (social, economical, biological, climatic and so on) and these effects can be aggravated by the complex systems involved in the environment sustainability, sustainbility demands a holistic approach (Bonnett, 2004). To ensure that we take action and not merely discuss sustainable development, Bonnett (2004) suggests that for satisfactory resolution of ethical and epistemological issues related to sustainable development, sustainability can be better concieved as 'frame of mind' rather than social and economical policies. Bonnett emphasises that the 'self-arising' qualities of nature state that nature is not a creation of humans (Bonnett, 2004). Therefore, nature should be treated as a *thing* that is fluid, open, infinitely faceted and epistemologically mysterious. *Things* that are part of nature have an organic relationship with one another rather than logical. These are the *things* that we emotionally connect with. We connect with the birds flying above us, trees around us, grass under our feet. In other words, Bonnett (2004) says that nature has integrity and intrinsic values, which is independent of how it serves humans.

In this research, I aim to understand 'changing learner behaviour' under environmental education to instill an environment-sensitive approach in children. I am in line with Bonnett's argument that with rising environmental problems, environmental education needs to embed attitudes of humility, empathy and respect, and the desirability of working in harmony with nature. With my personal belief that climate change is slowly and steadily destroying the natural elements of our planet and putting human and other living beings in great danger, my research work explores the significance of education that takes seriously the notion of being *in* nature and forming some of the 'mysterious' connections discussed by Bonnett. My core purpose then is to investigate how this sits in relation to more formalised educational experiences which stress the cognitive dimensions. I also believe in environmental consciousness and taking actions on an individual level to sustain life of all kinds, and being respectful towards all forms of life. The significance of my research on a global level is the education directed towards environment, *in* the environment, leading to environmentally literate individuals working towards tackling environmental issues in their day-today lives.

Environmentally conscious citizens could work towards improving the environment locally, for example, paying attention to segregating waste, maintaining local parks and gardens, and participating in programmes and protests in favour of environmental issues. They could also promote environmentally aware behaviour to their families and friends. On an individual level, these individuals might prefer to spend time outdoors, for example, camping, hiking, etc.; therefore, they would be aware of the positive effect that nature would have on their mental health. They could also develop empathy, kindness, team-work and leadership abilities through outdoor activities at school, which then they could apply in their personal and professional relationships (see Chapter 2). For instance, the concept Forest School introduces young people to nature and allows them to explore the surroundings independently. Research and studies undertaken about Forest School (Knight, 2015) claim that these children not only do well in their formal education settings, they also exhibit positive personality traits such as, leadership and team spirit. Forest School, as the main context of my research, will help me understand this connection better. However, the significant contributions towards society and to oneself through outdoor learning in nature have been derived from my literature review and personal experiences as an Environmental Science teacher and an active environmentally conscious world citizen. By linking formal education and outdoor learning, I am focussing on outdoor learning to be officially included in school curriculum. Therefore, through my study, I am endeavouring to contribute to the field of environmental education and this research can be considered as a 'first step' or a 'pilot study' for a larger research work.

Research questions

Main Research Question

What relationship does Forest School as an outdoor learning tool have with formal education with regard to environmental education?

Sub questions

- What associations between outdoor learning and formal education are recognised by school teachers and Forest School practitioners?
- Does Forest School facilitate environment sensitivity according to children and parents?

- How can Forest School be included in formal education according to teachers and Forest School practioners?

Possible research outcomes

The primary possible outcome of my MPhil research will be to establish an understanding of the significance of outdoor learning in relation to formal education, as well as the place of formal education in outdoor learning. Secondly, my research will potentially establish the link between the two in order to facilitate a better coordination between them. This will in turn will possibly contribute a new dimension to environmental education. With the increased conversations surrounding climate change and its implications on human beings, the most important possible outcome of my research is a change in formal education with the introduction of frequent outdoor learning promoting environmental awareness and consciousness in students, while acquiring curriculum-based knowledge.

As the research idea originated from my experience in India, my MPhil research will lay a foundation to further research a concept such as Forest School in a country like India where this form of extracurricular activity does not exist. However, personally, my study will provide me with a better picture of how to incorporate outdoor learning into formal education. With my dedication to environmental and climate change education, my aim is to assist governments and educational institutions with a revised curriculum in which outdoor learning fits well with the formal curriculum in the hope of enhanced environmental awareness and consciousness. With my intentions about my research study clear, I will now discuss the possible audience that my research will cater to.

Intended audience

By aiming to link outdoor learning with formal education and enhancing environmental education, the intended audience for my study has been divided into five categories. With Forest School as my case study, the Forest School Association (FSA) and Forest School practitioners are my first target group. My research provides them with evidence that outdoor learning and formal education can be linked. Most importantly, as discussed in Chapters 5 and 6, it also allows them to have a look at the current

Forest School system from a different perspective. Secondly, my intended target is academics. My research offers preliminary evidence of a crossover of knowledge between outdoor and classroom learning and therefore, the relationship between the two. It will also include information on Forest School from a practical point of view. My next intended audience comprises educational institutions. As mentioned in the previous section, I aim to work with educational institutions in introducing outdoor learning into formal education. However, it is important that parents understand the significance of outdoor learning. One of my main aims is to present a case to parents in order for them to understand the importance of outdoor learning as an educational tool. As discussed in Chapter 5, generally parents tend to consider outdoor learning as free play and therefore, at times, do not support even school promoted outdoor activities such as the Forest School programme. I hope my study will help parents understand how significant learning outdoors is for their children and the methods to link outdoor and formal education. Last but not the least, my final group of audience consists of the policy makers. Findings of my research make evident the fact that the interest shown by the government influences the programmes in schools (as discussed in Chapter 5). I aim for the policy makers beyond Britain and India to understand the importance of programmes similar to Forest School in the area of environmental education. Table 1.1 briefly displays my intended audience and the intended purpose.

Table 1.1

Intended audience and purpose of this research

S.no.	Intended audience	Intended purpose
1.	Forest School Association and Forest School practitioners	- link between outdoor learning and formal education - a different perspective to Forest School
2.	Academics	- evidence of crossover of knowledge - case study on outdoor and formal learning
3.	Educational institutions	- about Forest School - evidence of significance of Forest School

		- promote outdoor learning as part of formal curriculum
4.	Parents	- importance of outdoor learning for children - ways to link outdoor and formal learning
5.	Policy makers	- to support and fund outdoor learning in schools - to support environmental education

Through my research I endeavour to draw a line and form a meaningful connection between formal and informal, logical and mysterious and classroom and outdoors in the field of learning.

1.5. Summary of the chapter

Since the discussion on climate change and education in the 1980s, many nations have expressed interest in promoting environmental education as one of the tools to tackle climate change. With the United Nations increasingly focussing on environmental education, countries are being provided with platforms to build their own educational programmes. Coming from a country like India where environmental disasters are frequent and natural calamities create havoc every year, there is more awareness about the environment in recent years than ever. My interest in the environment led me to complete a degree in Environmental Science and then in Disaster Management. During this period, with the experience of being a teacher, I decided to work further in the field of environmental education. Through my research, I aim to bring formal and outdoor learning together as a tool to sensitise children towards nature and its elements, with added benefits to their health and intellectual capacity. This will potentially provide more evidence to schools, teachers, parents, academicians and even the government to consider outdoor learning as part of formal curriculum. As a chosen career path, I intend to keep working on this beyond my current case study on Forest School.

Chapter Two: Review of the literary context

2.1. Introduction

This chapter begins to lay the conceptual foundation to my study. The literature review introduces the various theoretical aspects of my research work. Section 2.2 explores the differences between traditional and progressive education and discusses key questions such as, what are the relative merits of 'progressive' learning and 'traditional' learning?

According to constructivism, though both traditional and progressive learning methods are important in their own ways, children learn through social and physical interactions with each other and the environment they are in. Section 2.3 explains Vygotsky's theory of constructivism and its eventual growth through other scholars such as Piaget and Popper.

Experiential learning by John Dewey, which is usually considered progressive, is the core theory of my research. Based on Dewey's book 'Experience and Education' (1938), section 2.4 presents experiential learning, followed by contributions by Kurt Lewin, Jean Piaget and David Kolb. Experiences through an event can differ from one individual to another based on various factors. The section on perception and learning investigates that further. Before we delve into this, we begin with a discussion of the tensions that exist between those approaches to education that have been categorised over the years as 'traditional' and 'progressive'.

2.2. Traditional and Progressive learning

To understand traditional learning in this study, it is defined as "classroom environments where students are usually presented with 'well-structured' problems that have definitive answers and change little over time and context" (Collins, Paisley, Sibthrop, & Gookin, 2011). The most common method of teaching in classrooms today

is traditional or direct instruction (M. A. Baker, 2012). Kierstead (1985) explains that traditional teaching practice is teacher-centered. This essentially means that almost all activities contain minimal student input, as decision-making, and indeed most talk, is predominantly carried out by teachers. A classroom session typically is structured by “introduction, input, modeling, guided practice, periodic checking for understanding and concluding with independent practice” (Kierstead, 1985, p. 25). According to Scott (2010), this methodology curtails the ability of students to explore and learn content and understand for themselves through experiences.

Going back, Freire (1974) calls this form of orientation that conceives of education as the transmission of fixed content the ‘banking’ concept of education:

> “Education thus becomes an act of depositing in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiques and makes deposits which the students patiently receive, memorise and repeat. This is the ‘banking’ concept of education, in which the scope of action allowed to the students extends only as far as receiving, filling and storing the deposits. They do, it is true, have the opportunity to become collectors or cataloguers of the things they store. But in the last analysis, it is men themselves who are filed away through the lack of creativity, transformation and knowledge in this (at best) misguided system. For apart from inquiry, apart from the praxis, men cannot be truly human. Knowledge emerges only through invention and reinvention, through the restless, impatient, continuing, hopeful inquiry men pursue in the world, with the world, and with each other” (Freire, 1974, p. 58).

According to Dewey (1956), while traditional education focuses on curriculum and cultural heritage for its content, it is rigid, regimented and tends to ignore the capacity and interests of the learner. The main aim here is to prepare children for their future by absorbing specified ‘bodies of information and prepared forms of skills’. The students are expected to be docile, receptive and obedient and the teachers are the medium through which information and skills are transmitted and the code of conduct enforced. Textbooks form the main source of “lore and wisdom of the past”.

On the other hand, scholars such as Ivan Illich and Paulo Freire have accused systematic traditional education of political and social control. According to Illich (1971) and Freire (1974), Western education maintains control through class discrimination by the capitalist system and is oppressive and conservative. Teaching in a 'third world' country (Brazil) at a time when literacy was imperative for suffrage and social growth (1950s and 60s), Freire (1973) stated that this system could be changed by instilling in the population 'critical consciousness'. Critical consciousness is "learning to perceive social, economic and political contradictions and to take action against the oppressive elements of reality" (Freire, 1974, p.4). According to Freire, when people are critical about what they are taught and what they learn, they question social dimensions such as oppression. This form of consciousness comes with interactions with others and being able to separate from and open to the world (Freire, 1973).

In line with Freire's 'critical consciousness', at the other end of the spectrum of education theory lies progressive education. In this thesis, progressivism in education is explained as follows:

> "First, it meant broadening the program and function of the school to include direct concern for health, vocation, and the quality of family and community life. Second, it meant applying in the classroom the pedagogical principles derived from new scientific research in psychology and the social sciences. Third, it meant tailoring instruction more and more to the different kinds and classes of children who were being brought within the purview of the school. ... Finally, Progressivism implied the radical faith that culture could be democratized without being vulgarized, the faith that everyone could share not only in the benefits of the new sciences but in the pursuit of the arts as well". (Ravitch, 1983, p. 46)

Kohn (2015) states that progressive education focuses on learners being good people and learning from each other in a caring community. Collaborative working strategy is implemented in learning, which then encourages the learners to actively design their own curriculum by asking questions and seeking answers. According to Kohn, progressive education also instills in learners the idea of social justice and provides opportunities to improve the lives of others. Progressive educators focus on activities

that would kindle intrinsic interest and emphasise interdisciplinary teaching. Learners are also encouraged to think deeply about problems and issues they come across. Most importantly, progressive educators follow the instincts of the learners and pay attention to every individual's set of interests. The curriculum changes every day and takes the shape of the learners' interests and curiosity.

Progressive education criticises traditional education for being based on the principle that the future will remain the same as the past. Education based on textbooks and adult thinking hinders active participation from children. The gap between mature, adult teachers and young students is so large that both the subject matter and the method of learning are beyond the grasp of immature young learners. Kohn claims progressive education resists conformity and standardisation; it does not have a fixed definition. However, it thrives on the concepts of a belief in experimentation, a commitment to the education of all children and to democracy in the school (Ravitch, 1983). Even though progressive education refers to co-operation among teachers and students, clarity around active learning and learning for general well-being, according to Dewey, is not present. Hence, Dewey emphasises learning via doing or experiential learning, which connects knowledge with experience.

In 1932 Gramsci (translated and published in 1971) argued that traditional education was needed to implement class equality. He insisted that economically neglected and oppressed classes should be taught to read and write and provided traditional knowledge in order to understand how society functions around them. In his opinion, especially children from the lower class should not be encouraged to follow their instincts or learn from their experiences because this would keep them locked in the impoverished world they lived in. They must be taught to value hard work and taught knowledge that would make them understand and master the culture around them (Gramsci, 1971). In that way, they would strive to be better economically and grow. Scholars such as Hirsch (1997) claim that Gramsci has a better and logical understanding of education than Freire. Hirsch states that,

> "Educational liberalism is a sure means for preserving the social status quo, whereas the best practices of educational conservatism are the only means

> whereby children from disadvantaged homes can secure the knowledge and skills that will enable them to improve their condition." (Hirsch, 1997, p.42)

The above statement by Hirsch supports traditional education for an economically and socially improved society, where as a 'naturalistic, project-oriented, critical-thinking and democratic' education maintains the society as it is. In addition, Hirsch has presented traditional and progressive education as it is discussed in USA and provided explanations in support of traditional education, which I found very interesting. Hirsch claims that traditional education is misrepresented to the public as 'merely verbal, premature, fragmented, boring, and lockstep instruction', whereas, progressive education is presented as 'modern, hands-on, developmentally appropriate, integrated, interesting, and individualized'. This form of apparent biased presentation of progressive education makes it more appealing for parents. In the following section, I discuss how Hirsch has made an attempt to unpack the above definitions.

Firstly, traditional education is described as recitation, memorisation, recall, testing, grades, promotion, and failure (Hirsch, 1997, p.42). This requires learners primarily to be passive listeners in their seats and work on fitting in their minds the information that their teacher hands them. This then extends to memorising the lessons and being ready to regurgitate the information when asked. Although, Hirsch also argues that the traditional form of education is successfully followed in many developed nations, which also helpes in maintaining the status-quo of classes in those countries. Also, the subject matter can be taught creatively, i.e. it is not necessarily 'boring'. More interestingly, according to Hirsch the non-traditional educational system is leading to decline in academic competencies and many learners might even be less interested in this form of education.

Secondly, traditional education is blamed for promoting verbal learning and not hands-on learning. Hirsch argues that the history of traditional education supports hands-on learning where necessary. However, it very rightly pays more attention on the ability to reading and write. Progressive learning instructions support the idea of using senses; seeing, touching, smelling; in learning about a subject, thereby negating the importance of verbal abilities that might hamper students with limited vocabularies due to family drawbacks.

Thirdly, Hirsch claims that ‘premature’ knowledge is taught in many countries and the learners are learning very well. Conversely, developmentally appropriate knowledge might disadvantage some learners coming from deprived backgrounds. Moreover, Hirsch argues that the concept of developmentally appropriate knowledge is not empirically supported. A standard traditional knowledge is necessary to maintain an equal opportunity for all learners to gain the same knowledge at the same time.

Furthermore, Hirsch maintains that both traditional and progressive education follow the line of instruction where information is imparted in pieces to show how things fit together. However, the traditional mode of education is accused of fragmentation by progressive educators to point at subjects such as Biology, Mathematics and Language where information is meant to be provided in a piecemeal manner. According to Hirsch, the thematic approach to knowledge dissemination leads to failure in learning of the most fundamental elements of different subject matters.

Progressive educators claim that knowledge is gained through learners’ experiences. Therefore, early education should be less about specific subject matters and more about topics directly relevant to the learners, such as their home, neighbourhood and so on. However, Hirsch points out that subject matters in *themselves* do not stimulate interest or disinterest. Educators have the capacity to make subject matters interesting and thereby make learning interesting. Hirsch makes an interesting and a convincing argument that if only what matters and what is relevant to learners are to be taught in the early years then dinosaurs and fairies have no place in that which is taught. He contends that calling classic subject matters boring and irrelevant is “anti-intellectual and anti-academic bias” (Hirsch, 1997, p. 43).

Finally, Hirsch states that traditional learning is about the entire class and therefore, providing the same knowledge to all learners in the same classroom. Progressive learning although aiming to be individualistic, aims at giving individual attention to the learners based on their abilities and interests. This, according to Hirsch, is not only impractical, but is also not necessarily effective enough. For instance, several research findings show that even those learners who require individual attention learn better in groups. Hirsch argues that if an educator pays attention to one student then rest of the class is confined to their seats learning nothing at all. Hirsch has made an argument that progressive learning incentives and benefits are not necessarily proven true. A proper empirical investigation proves the democratic, new age learning to be harmful than advantageous to the learners.

Considering that my research strives to find a balance between traditional and progressive education, in this case outdoor learning, I find Hirsch's arguments very interesting. I agree that learning about fundamentals of subject matters such as Physics, Biology and Mathematics are necessary to obtain a universal knowledge base. However, building on this knowledge and connecting various subject matters itself should be learners' choice and could be productive and more emphatic. Dewey argues that as long as the main aim of education is fulfilled, whether the methodology is traditional or progressive is irrelevant. He also states that progressive education in itself is not enough for generation of knowledge. He emphasises the importance of traditional education as the primary source of standardised knowledge; however, progressive education provides the independence to learners to experiment. In order for this to happen, Dewey stresses the importance of the experiences that the learners have to create and re-create knowledge and connect them to make meaningful theories; experiential education. My research is in tandem with this view. My working assumption states that traditional and progressive knowledge must inform each other for learners to be active participants in their learning process and thereby learn as they experience curriculum-based knowledge outside the classroom. When learners get opportunities to apply classroom-based knowledge out in playground or field or woodland, their learning is more effective and cemented with actions and counter-actions.

The next section introduces the theory of constructivism which is essential to understand concepts such as experiential learning because it focuses on the importance of interaction in learning.

2.3. Constructivism

In the early 1900s, Vygotsky developed a social development theory which acted as an important foundation to constructivism. His work became recognised and was published posthumously in the 1960s and 70s. Vygotsky differentiated knowledge into two kinds. One was theoretical, also known as scientific, the other was everyday

knowledge. According to Vygotsky the task of providing theoretical knowledge lies with the school, through formal curriculum often organised through subjects. However, access to higher order, scientific concepts is not a one-way process. It is a complex pedagogic process that involves the learner's everyday experiences and learnings being extended and transformed by school knowledge. This could also aid in providing knowledge on important aspects of life and life-skills which the traditional school system may not include in its curriculum, such as sex education and vocational skills. However, the concern is that the everyday knowledge takes over theoretical knowledge and replaces its essential contents and methods. Therefore, leaners fail to learn subject-based information which is not otherwise available to them, for example, Probability, Cellular Biology, Quantum Physics and so on.

Additionally, Vygotsky (1962) claimed that children learn through social interactions. It is through discussions, for example, that children learn and then internalise scientific concepts. He also supported the importance of the more knowledgeable other's (teacher's) role in aiding learning. In other words, children do not learn automatically, and teachers can help to 'scaffold' the thinking required in order to grasp an abstract idea. Therefore, learning is a social process linked with teaching.

J . Piaget (1952) suggested that a child learns by both physical manipulation of her environment and the mental manipulation of learned concepts and was keener on child development. Every new concept or object encountered is explored and integrated with the existing experiences and knowledge. If the new concept or experience does not fit in with the already existing information, then the child undergoes cognitive disequilibrium. This cognitive disequilibrium requires the child to create space for the accommodation and then assimilation of the new knowledge. This new concept will again be challenged every time the child encounters new experiences and knowledge. In his conversation with Bringuier (1980) Piaget stated that:

> "For me, it's quite the contrary of a copy of the world: it's a reconstitution of reality by the concepts of the subject who, progressively and with all kinds of experimental probes, approaches the object without ever attaining it in itself." (Bringuier, 1980, p. 64)

Furthermore, distinguishing assimilation and accommodation, he explained, that

> “The two processes involved in accommodation are determined by the object whereas assimilation is determined by the subject. It's the fact that a stimulus from the external world, any excitant, can act on or modify behavior only to the degree that it is integrated with prior structures. Assimilation and accommodation cannot be dissociated." (Bringuier, 1980, pp. 41-44)

Piaget believed that knowledge is created when a learner comes across a new, external stimulant/object/concept. If her experience with this external stimulant cannot be assimilated with the existing knowledge in her mind, then a new set of concepts or information is created. Both assimilation of knowledge and the accommodation of it in the child’s mind go hand in hand. The external stimulant excites the learner and evokes curiosity. As the learner experiences the stimulant, information is generated. This information must be assimilated with the existing knowledge and the necessary accommodation is done by making adjustments and thereby creating new knowledge.

On the other hand, Karl Popper (1972) has suggested the ‘Three worlds dynamic’, with open and closed theories to explain knowledge creation. World One is the external physical state of the world as it is: this refers to real, existent objects whether we as individuals ‘know’ them or not. World Two is the interpretation of World One through a person’s experiences, values, culture, emotions, personality, etc. World Two is a transformed World One based on an individual’s point of view. World Three is the product of an individual’s mind in the form of art, books, language, architecture and other human forms and creations. Therefore, World Three is the creation or expression of World One interpreted through an individual (World Two). This theory particularly interested me because through Forest School, I was looking forward to studying the connection between the thoughts that were provoked through the experiences in the woodland and its transpiration through activities and actions.

Popper (1972) further explained that the creations of World Three are important as these explain and describe natural processes, in the form of either open or closed theories. The constant friction between these theories aids in the creation and expansion of knowledge. Open theories are subjected to constant *falsifiability* and

hence constantly tested and modified. In order to check the falsity of the theories, the assumptions of the theories are subjected to empirical tests and evaluations. If the result is compatible to the existing theory, then no changes are made. However, if the results are incompatible to the existing theory then the theory itself is modified to accommodate the discrepancies. Closed theories, on the other hand, are not available for critical evaluation as the reference points and presumptions of these theories restrict any change. These theories do not depend on new events and are thereby impervious to changes. Therefore, it is open theories that support the formation and expansion of knowledge. Popper's open and closed theory was challenged by Wittgenstien (1988) who claimed that constructivism supports the notion that 'everything is possible' and hence theories ought to be 'open' at all times in order for the formation of new information. Wittgenstein's proposition was that learners are constantly dealing with theories that can be and will be moulded with further experiences and even direct exposure to knowledge, such as in school. To me, both Popper and Wittgenstein talk about experiential learning, as explained in the next section. New experiences may incite the learner to question existing theories and form new ones. On the other hand, if the new experiences seem irrelevant or unexciting then no new information is created. This knowledge is expressed through words and actions and other avenues provided to the learner.

However, Harlow, Cummings, and Abarasturi (2007) criticise the contemporary understanding of constructivism based on its almost sole focus on the assimilation of new information. This tends to imply a passive process which allows traditional teaching methods to offer information to students, who incorporate the knowledge fed out to them. If a learner has an experience contrary to her knowledge she has received at school, she will be forced to question the existing information. Within this framework, it is not a teacher's responsibility to facilitate a challenging environment where learners constantly test and question the information they receive. This appears to explain the one-sided flow of information in schools today: that is, a restricted and inadequate concept of constructivism.

My study also challenges such an approach and attempts to suggest incentives to take learning outside the classroom and expand the horizons of learning. The next

section throws more light on experiential learning and the manner in which my research focuses on it specifically.

2.4. Experiential learning

2.4.1. The story so far

Experience, according to Dewey (1938, p. 10), is a “moving force, it influences the formation of attitudes of desire and purpose; it is the principle of interaction and continuity”. Following the thoughts of Dewey (1916), education itself is constant reorganising and reconstruction of experiences. Therefore, experiential learning can be defined as “a pedagogical methodology in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills, clarify values and develop people’s capacity to contribute to their community” (AEE, 2014).

Experiential learning is the process of learning through experience, more specifically defined as "learning through reflection on doing" (Felicia, 2011). According to Kolb (1984), experiential learning provides education and learning with a new approach. The approach considers learning a lifelong process that is soundly based on intellectual traditions of social psychology, philosophy, and cognitive psychology.

However, the roots of experiential learning date back to as early as 4th Century BCE, when Aristotle suggested that a theory is not understood until a person has the ability to apply it[11]: “Their using the language of knowledge is no proof that they possess it" (Aristotle). Thus, various scholars from Aristotle to Dewey, and more recently, Kolb, have explained experiential learning as the cornerstone of the learning process. The following sections will explore the history of experiential learning and look at the various models of experiential learning. Apart from creating a better understanding of experiential learning, this section will also inform us about the common characteristics of learning through experience.

[11] http://www.experientiallearning.ucdavis.edu/tlbx-links.shtml

In the mid-nineteenth century in the US, there was an attempt to move from formal, abstract education, where teachers present information and hope that students will later apply the knowledge, to more experience-based approaches (Lewis & Williams, 1994). Kolb (1984) maintains that the works of John Dewey (1939), Kurt Lewin (1951) and Jean Piaget (1970) significantly contributed to the conception of experiential learning. The second line of contributors, according to Kolb (1984), are Paulo Freire (1973, 1974) and Ivan Illich (1972). A few others who have contributed to the understanding of experiential learning are Carl Jung in his work reflecting therapeutic psychologies, Carl Roger and the humanistic traditions of client-centered therapy, Fritz Perl with his gestalt therapy which emphasises on personal responsibility and Abraham Maslow with the self-actualisation psychology (Kolb, 1984).

Dewey's philosophy of education proposes education through experience. Sound educational experience involves continuity and interaction between the learner and what is learned (p. 10). The two key principles here are continuity and interaction. Continuity states that all experiences (past and present) are carried forward and influence future experiences and decisions (Dewey, 1938, p. 35). Interaction, on the other hand, refers to the objective and internal conditions of an experience (Dewey, 1938, p. 42)[12]. Similarly, Lewin's experiential learning research on group dynamics proved to be one of the most potent educational research projects in the last century (Kolb, 1984). Lewin's T-groups (T=training) system is employed in varied organisations and community systems for planned change interventions (Kolb, 1984).

Piaget, on the other hand, considered action as key to learning (Kolb, 1984). Piaget's theory claims that intelligence is a result of experience and not an innate internal characteristic of an individual. It arises as a product of the interaction between the person and their environment (Kolb, 1984). Contemporary to Piaget's work, James Bruner in 1960 discussed the ineffectiveness of teaching specific theories or topics without explaining or connecting them to the practical aspects or applicability of those theories. Intellectual excitement is imperative in learning and the best way to attain that is to render the theories worth knowing. By making a topic worth knowing, children

[12] https://eiclsresearch.wordpress.com/types-of-styles/teaching-styles/john-dewey/deweys-philosophy-on-experience-and-education/

learn the usability of the topic beyond the walls of classroom. Most importantly, according to J. S. Bruner (1960), knowledge must have structure to it or else it will be forgotten. Structure is the principle and the minimum requirement of knowing a particular topic.

In the forthcoming section I have concentrated on the key contributors to the theory of experiential learning: Dewey, Lewin and Piaget. Contemporarily Kolb has contributed to the theory of experiential learning, though this has been influenced by the aforementioned three scholars.

2.4.2 John Dewey

Dewey (1938) strongly believed that education must be experience based in order to meet its aim for both the learners and the society. For Dewey, experiential learning meant a cycle of “trying” and “undergoing” by “becoming aware of a problem, getting an idea, trying out a response, experiencing the consequences, and either confirming or modifying previous conceptions’’ (Lewis & Williams, 1994, p. 16). This process has the potential to remodel an individual’s cognitive abilities, in relation to physical experiences as well as in a social capacity (e.g. overcoming one’s biases). This form of continuous meaning making over a period of time leads to ‘learning to learn experientially’. He emphasised experiential continuum which distinguishes experiences based on their inherent values. Every experience modifies the individual in some way and consequently influences the subsequent experiences. Therefore, it is a ‘somewhat different’ person who enters the experiences in the future. Hence, continuity of experience states that every experience both takes something from the individual and modifies the quality of experiences in the future.

In Experience and Education (1938), Dewey further explains the formation of knowledge through experiences. The formation of purposes is, then, a rather complex intellectual operation. It involves:

1. Observation of surrounding conditions;
2. Knowledge of what has happened in similar situations in the past, a knowledge obtained partly by recollection and partly from the information, advice and warning of those who have a wider experience;

3. Judgement, which puts together what is observed and what is recalled to see what they signify.

> "A purpose differs from an original impulse and desire through its translation into a plan and method of action based upon foresight of the consequences of action under given observed conditions in a certain way… The crucial educational problem is that of procuring the postponement of immediate action upon desire until observation and judgement have intervened…Mere foresight, even if it takes the form of accurate prediction, is not, of course, enough. The intellectual anticipation, the idea of consequences, must blend with desire and impulse to acquire moving force. It then gives direction to what otherwise is blind, while desire gives ideas impetus and momentum" (Dewey, 1938, p. 69).

Dewey describes learning as a conflict between integrating experience and concepts, observations and action. The first impulse of a completely new experience thrusts ideas forward providing direction to second impulse. Immediate action is postponed in order for observation and judgement to take place. Action then eventually leads to purpose. However, for an action to occur, judgement and observation have to constantly interact with impulse and knowledge and create new sets of impulse, observation, knowledge and judgement. Dewey's theory of experiential learning highlights the importance of previous experiences when an individual encounters a new one. The new experience does not directly lead to a judgement and then an impulsive action, but it feeds into the previous experience which then incites a new judgement and hence a new purpose through a planned action. These accumulated experiences over a period of time change our understanding or judgement of our observations and hence they form our 'intellectual anticipation' and 'idea of consequences' which mix with our first impulse for action and lead to a planned response or purpose.

2.4.3. Kurt Lewin

Lewin's contribution in the field of action research and laboratory training is highly valued (Kolb, 1984). In this regard, learning, change and growth are believed to be best observed by an integrated process that commences with a 'here and now'

experience within the T-group (training group). This is followed by collection of data and observations about that experience. The analysed data and conclusions are then presented back to the participants of the experiment for them to reassess their behaviour and thus facilitate the choice of new experiences.

To elaborate this further, according to Lewin, learning happens in four stages. The basis for observations and reflections is formed by an immediate substantial experience. These observations and reflections then are integrated into a 'theory'. This 'theory' can then lead to the formation of new inferences or hypotheses for action. New experiences are guided by these inferences. According to Kolb (1984), two aspects of this model are to be noted: firstly, as mentioned above, the emphasis is on 'here-and-now' definite experience to 'validate and test abstract concepts'. The principal point of learning here is the immediate personal experience. This experience "gives life, texture and subjective personal meaning to abstract concepts" (Kolb, 1984, p. 21). Concrete and publicly shared experiences then facilitate the testing of the inferences and validate the ideas. Hence, Kolb (1984) states that when human beings share an experience, they can share it fully, concretely and abstractly. Secondly, action research and laboratory training are based on feedback processes. For Lewin, introducing feedback in his experiment meant combining the immediate experiences of the participants of the training with the conceptual model of the staff in-charge. This feedback information provides the basis for a continuous process of goal-directed action and evaluation of the consequences of that action.

Kolb (1984) emphasises upon Lewin's findings suggesting that learning is best facilitated in an environment where there is dialectic tension and conflict between immediate, concrete experience and analytical detachment. The feedback process is introduced in an open atmosphere where inputs from each perspective (the participants and the staff) could challenge and stimulate the other, and therefore, a creative and energetic learning environment emerged. Here, the emphasis is on subjective experience that has developed into a strong commitment in practice, existential values of personal involvement and humanistic values emphasising that feelings as well as thoughts are facts (Kolb, 1984).

2.4.4. Jean Piaget

Piaget believed that children learn from their experiences and interactions with the environments around them (Halpenny & Pettersen, 2013). His work claims that theory is informed by practice and action and comes before knowledge. Piaget was interested in why children gave different answers to the same question. He believed that this was due to the key differences between each individual child and adult[13]. The journey from infancy to adulthood moves from 'an active egocentric view to a reflective internalised mode of knowing'. Piaget believed in 'mutual interaction of the process of accommodation of concepts to experience in the world and the process of assimilation of events and experiences from the world into existing concepts as the key to learning. Intelligent adaptation results from a balanced tension between these two processes' (Kolb, 1984, p. 23).

Piaget explained the stages of learning as following: Stage 1 (0-2 years) is the sensory motor stage where learning predominantly is through feeling, touching and handling. This is a concrete and active learning style. Stage 2 (2-6 years) is the representational stage. A child begins to be reflective and starts to internalise actions and converting them into images. Stage 3 (7-11 years) is the concrete operations stage. The abstract symbolic powers begin and are governed by the logic of classes and relations. Stage 4 (12-15 years) is where the adolescent moves from symbolic processes based on concrete operations to the symbolic processes of representational logic, the stage of formal operations. The basic learning style becomes convergent wherein the adolescent develops the possible implications of his theories and proceeds to experimentally test which of those are true.

2.4.5. David Kolb

Kolb believes that a child's mind is not like an empty vessel seeking to be filled. In fact, factors such as knowledge, values, relationships and intentions influence how children behave and learn. According to Kolb (1984, p. 41), 'learning is the process whereby knowledge is created through the transformation of experience'. Kolb's learning cycle appears to be inspired by scholars such as Dewey and Piaget. It explains the emergence of four different types of knowledge due to two dialectically opposed

[13] https://www.simplypsychology.org/piaget.html

prehensions (concrete experience and abstract conceptualisation) and similarly two dialectically opposed ways of transforming these prehensions (reflective observation and active experimentation).

Kolb (1978) has suggested an experiential learning model of four stages for learning new knowledge, skills or attitudes. To be an efficient learner, one requires following four abilities:

1. Concrete experience ability to emerge openly, without any bias and completely in the new experience.
2. Reflective observation abilities to be able to observe and reflect on their experience from various perspectives.
3. Abstract conceptualisation abilities to generate concepts that assimilate their observations into logically thorough theories or ideas.
4. Active experimentation – the ability to use these ideas to make decisions and solve problems.

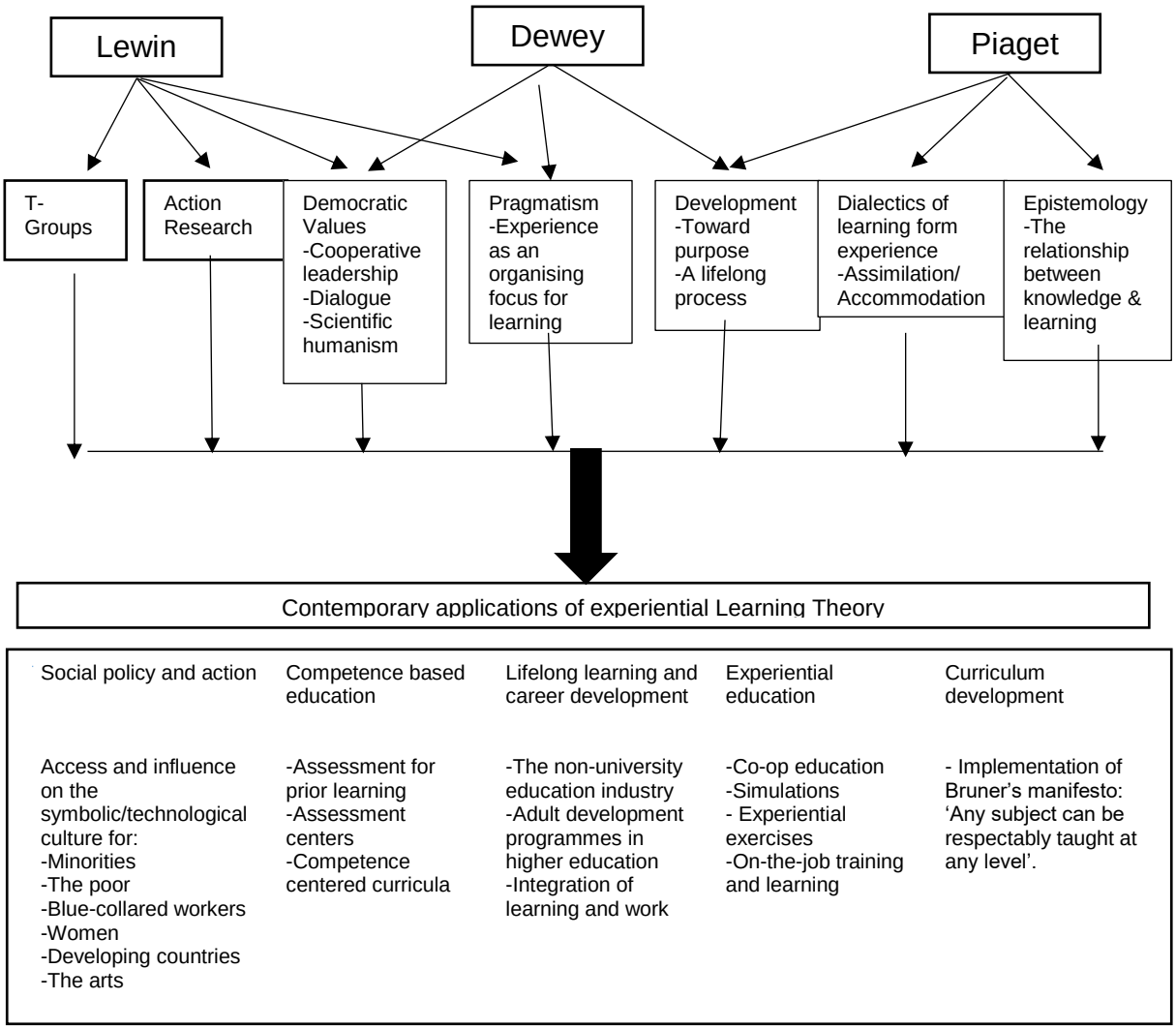
However, learning demands abilities that are the polar opposite. One must observe and reflect at the same time and therefore the individual must continuously decide what learning abilities she must chose in a given situation. In the dimensions of learning, concrete experiencing of events, abstract conceptualisation, active experimentation and reflective observation, one moves in varying degrees: 'from actor to observer, and from specific involvement to general analytic detachment' (Kolb, 1984, p. 31).This concept is supported by learnification by Biesta (2009), wherein emphasis is laid on students learning 'something' from 'someone' for a specific 'purpose'. This states that education has a range or 'domain of purpose' and it is not just based on academic achievement for a career. In other words, learners have the choice to learn what they want, for the reason they want.

2.4.6. Significance of Experiential Learning

In order to understand the importance of experiential learning in the various aspects of human life, Kolb (1984) has combined the traditions of Dewey, Lewin and Piaget and proposed themes offering guidance and direction for programmes of experiential learning and the contemporary implementation of experiential learning. Figure 2.1

describes the guiding themes of experiential learning as T-groups, action research, democratic values, pragmatism, development, dialectics of learning from experience and epistemology. The contemporary application of experiential learning has a wide range of use from social policy and action, lifelong learning and career development to curriculum development.

Figure 2.1. Three traditions of Experiential Learning (Kolb, 1984)



This diagram shows the common undertone in all three traditions, emphasising on the advancement of "life of purpose and self-direction as the organising principle of education" (Kolb, 1984, p 18).

In the ‘battle’ between traditional and progressive education, Dewey maintains that the purpose of progressive education will be defeated if it is simply based on rejection of aims and principles of traditional education and there will be no substantial and constructive development of its own purpose. Progressive education itself will turn dogmatic if it is not founded upon critical examination of its own principles. If the emphasis is on the freedom of the learner, then that itself is a problem set for progressive education to ponder upon and resolve; such as; what does freedom mean? How is a learner defined? What will the conditions for realisation of freedom be? Even though the bounded subject matter taught in the traditional education system is from the past, progressive education has to discover the relationship that exists within the experience between the achievements from the past and the unknown future. The ways in which the relations from the past can be used effectively to deal with the problems in the future must be clear. Similarly, the relationship with the learnings from the past should also make the learner understand and appreciate the present. Hence, mere rejection of traditional education does not resolve the problems of education but presents new sets of problems or questions. If not placed strongly and based on ideas, progressive education will tend to survive on abstract concepts of freedom and education and will grapple with the practical aspects of education and learning. According to Dewey (1938), amidst all these uncertainties, the ‘permanent frame of reference’ is the ‘organic connection between personal experience and education’ (p. 25).

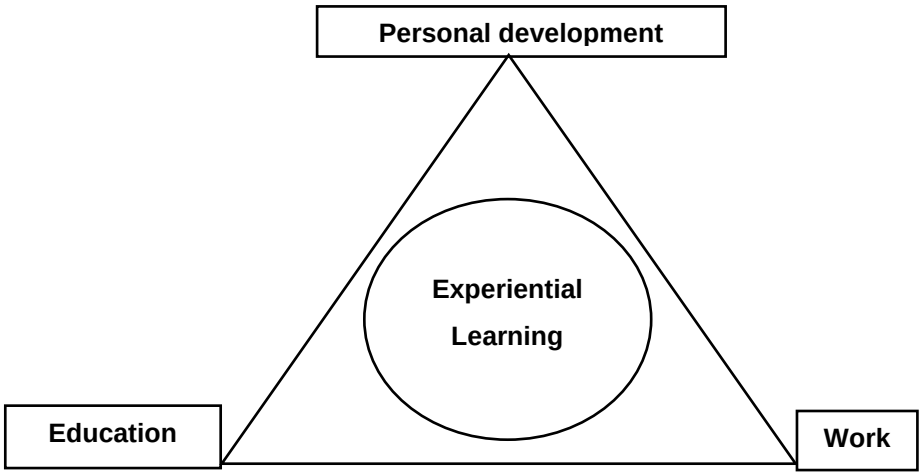
Beard and Wilson (2006) explain learning from experience as the most basic and natural means of learning available to everyone. Opportunity to reflect and think, either alone or in the company of other people, is the requirement in most cases. They suggest that experiential learning is a repetition of the same idea, as experience and learning mean the same thing. It can also be defined as the “sense-making process of active engagement between the inner world of the person and the outer world of the environment” (Beard & Wilson, 2006, p. 19). Experiential learning is, in essence, the underpinning process to all forms of learning since it represents the transformation of the newest significant experiences to incorporate them within a broader conceptual framework. This notion of experiential learning is supported by Boud and Walker (1993), who state that experience and learning go hand in hand. According to them,

when a learner is engaged with an experience, she learns from it and ‘learning builds and flows’ through her experiences. Similarly, it is the experiences that the school environment creates which promote learning in students and not the teaching itself.

It appears that experiential learning is the potential resolution to the contention between traditional and progressive education: a sort of a bridge between the two. Traditional education is about the past and the theories in it are set and rigid, and as time changes, education and knowledge must change as well. However, past or old knowledge provides us with a platform to understand our present and build our future. Hence, merely criticising traditional education and supporting democracy in classrooms will not be effective. On the other hand, progressive education itself must have set principles of its own. As Dewey mentions, without set fundamental values of its own, progressive education may fail in its endeavour to educate children effectively. Learning by doing or experiential learning provides progressive education the platform upon which it can balance the knowledge from the past and the freedom to learn. Kolb’s conception of three traditions of experiential learning (Figure 2.1) is key in understanding that experiential learning can be employed productively in the personal and professional development of individuals and that experiential learning is a powerful tool for gaining knowledge and supports the augmentation of intelligence at various levels of human growth. Therefore, experiential learning is diverse in nature.

Kolb (1984) maintains that experiential learning theory is soundly based on ‘intellectual traditions of social psychology, philosophy and cognitive psychology’ which then offers a foundation for an approach to education and learning as a lifelong process. Figure 2.2 shows experiential learning as a tool that strengthens the important links between education, work and personal development. ‘It offers a system of competencies for describing job demands and corresponding educational objectives and emphasises the critical linkages that can be developed between the classroom and the ‘’real world’’ with experiential learning methods’ (Kolb, 1984, pp. 3-4).

Figure 2.2. Experiential Learning linking Education, Work and Personal development (Kolb, 1984)



This model (Fig 2.2) not only emphasises on the role of formal education in lifelong learning and the development of individuals to their full potential as citizens, family members and human beings, but it also considers the workplace as a learning environment that can enhance and supplement formal education and foster personal development through meaningful work and career-development opportunities (Kolb, 1984). As mentioned previously, Biesta's 'learnification' also focuses on multiple domains of purpose or functions of education. The three main domains focused by Biesta (2010) are qualification, socialisation and subjectification, which should direct the aim of learning – 'what we seek to achieve for our students and what we seek our students to achieve'. Both Kolb and Biesta's theories of learning describe learning in very similar ways.

Considering that my research attempts to provide the possible relationship between traditional and progressive learning, the important question at this point for me is: What is learning? The next section endeavours to answer this question by bringing Kolb and Boud et al together in providing the characteristics of learning. These characteristics stress upon the significance of the role played by experiential learning in various regions of human development.

2.5. Characteristics of Learning

Various theories of learning and the significance of experience confer similar attributes to describe learning, knowledge and experience. This section attempts to combine the characteristics of learning mentioned by Kolb (1984) and the propositions of learning stated by Boud and Walker (1993).

1. Learning is a process of active construction of experience

Bruner states that the purpose of education is to stimulate inquiry and skill in the process of acquiring knowledge and not to memorise a body of knowledge. “Knowledge is a process not a product” (J. Bruner, 1966, p. 72). The process of ever-changing concepts due to experience from which they emerge is called learning. Concepts or ideas are not fixed and unchangeable elements but change with experiences. Experiences are created by the transaction between the learner and the environment in which she functions (Boud & Walker, 1993). No two ideas are the same as no two experiences are the same.

Similarly, Piaget considers ‘the creation of new knowledge to be the central problem of genetic epistemology, since each act of understanding is the result of a process of continuous construction and invention through the interaction processes of assimilation and accommodation’ (J. Piaget, 1970, p. 99). The continuous process of creation of knowledge and its adoption and implementation, according to Piaget, is also dependent on the genetic make-up of an individual. At the same time, the learner’s personal foundation of experience, according to Boud and Walker (1993), is based on the influences of events and experiences from the past and these, in turn, direct the method of construction of experiences in the present. The personal foundation is well guarded and may not be readily available to the learner herself. Part of this foundation can be available through intent, which may or may not have anything do with the original objectives of the experience, for example, a planned event. As learning emerges from experiences that have already occurred, it can be defined as an emergent process whose outcomes represent only historical record, not knowledge of the future (Kolb, 1984).

2. Learning is a continuous process grounded in experience

As mentioned earlier, for Dewey, the core of a learning process is the continuity of experience. Experiences in the past influence the experiences of the future. Some of the past is carried forward into the future and both the learner and the experience change from what they were originally meant to be. Similarly, Kolb (1984) states that experiences give rise to knowledge constantly and a learner continuously tests that knowledge further in her experiences. Every experience leads to reflection, which is not just a self-involving process, but also consists of interaction with the environment and with other individuals. This reflection then leads to the genesis of new ideas, concepts or learnings. However, based on previous learnings, the learner enters a new experience with preconceived notions and ideas. As she enters into new experiences she learns again, i.e. relearning. However, in the event of inconsistency between past and future learning, there may not be any new learning that takes place, or it may not be considered significant learning. Boud and Walker (1993) state that our personal history significantly affects the way we experience and even what we consider as an experience in the first place. For instance, where do we come from? What have we learnt in the past? And, who are we? No new experience is considered fresh but judged and accepted with relation to previous experiences and learning. Additionally, as Piaget has mentioned, our genetic make-up also plays an important role in our understanding of our experiences and the world.

Piaget identifies two mechanisms of assimilation of new ideas – integration and substitution. Thoughts evolving through integration tend to become very stable parts of an individual's conception of the world. However, the possibility of reverting to old ideas is highly likely when they are changed by the means of substitution or a state of a dual theory of the world where ideas adopted through substitution are incompatible with or dissimilar to ideas-in-use that are more assimilated with that individual's total understanding and conceptualisation of the world.

3. Learning is a holistic process affected by the socio-emotional context in which it occurs

Kolb (1984) suggests that experiential learning is molar in concept. Which means that that experiential learning assimilates the functioning of the total organism, such as, thinking, feeling, perceiving and behaving. In other words, the entire human adaptation

of its social and physical environment is reflected in experiential learning. Humans evolve through learning and learning constitutes of experiences from beyond the school-classroom and hence occurs in all settings: workplace, supermarket, boardroom and playground. It is, thus, a lifelong process. Being holistic, learning involves domains such as “feelings and emotions (affective), the intellectual and cerebral (cognitive) and action (conative)” (Boud & Walker, 1993, p. 13). These domains interact with each other in complex ways during learning from experience. This process also constitutes smaller or limited adaptive concepts such as creativity, problem solving, decision making and attitude change (Kolb, 1984). As one goes through the day and various emotions, the adaptive concepts vary in space and time. An instant reaction to a situation or a problem, typically, is not considered learning but a ‘performance’. It is marked by the first few seconds or minutes or hours of registering and responding to an experience. Similarly, a long-term adaptation to one’s complete life situation is called a ‘development’. This is the interpretative phase which occurs in the next few days or weeks or months after an experience. And ‘learning’ here is defined as a long-term mastery of generic situations. Integration of an experience whilst deriving meaningful perspectives demands years or decades or lifetimes. In experiential learning, performance, development and learning remain in a continuum together. Two of the most significant factors that affect or influence this continuum are confidence and self-esteem in the learner. The emotional state that the learner is in influences what the learner takes back from the experience. For instance, if the learner is not confident about her capabilities, then she may not take back any outcome from her experience. Confidence in the learner’s own ability is key to learning or else the learner remains passive in the process.

4. Learning is the process of creating knowledge

According to Dewey, the transaction between personal and social knowledge results in learning. Social knowledge is the ‘civilised objective accumulation of previous human cultural experience’ or objective learnings. Personal knowledge, on the other hand, is the ‘accumulation of the individual person’s subjective life experiences’ or subjective learnings. And therefore, in order to understand knowledge, as Kolb says, ‘we must understand the epistemology – the origins, nature, methods and limits of knowledge’ (Kolb, 1984, p. 37).

Kolb (1984) also suggests that the theory of experiential learning helps us to understand different types of knowledge that are generated through dialectic conflicts between adaptive modes of concrete experience and abstract conceptualisation and the modes of active experimentation and reflective observation. Dewey, Lewin and Piaget also talk about conflicting ways of dealing with the world and the resolution of these ways. The main conflict, for Dewey, is between the impulse that gives ideas their 'moving force' or action and the reasoning that an individual has, which gives the action its direction. Lewin's model mentions a conflict between concrete experience and abstract concepts and the conflict between observation and action. Piaget emphasises on the twin processes of 'accommodation of ideas to the external world and assimilation of experience into existing conceptual structure' and refers to them as the 'moving forces of cognitive development' (Kolb, 1984, p. 29).

Similarly, for Freire "the dialectic nature of learning and adaptation is encompassed in the concept of practice wherein one reflects and acts upon the world in order to transform it" (1974, p. 36). Creating knowledge or learning is characterised as a conflict filled process. The manner and level at which this conflict gets resolved marks the level of learning or generation of knowledge. As mentioned previously, suppression leads to a temporary learning and dominance. If the tension is resolved by the suppressing of one event or /and dominance by another, then learning tends be around the dominant event and less around the suppressed event.

5. Learning involves a transaction between person and environment, influenced by social and cultural aspects

According to Dewey (1934), an event is experienced by an individual both internally and externally. The internal conditions are subjective and external are objective in nature. The interaction between the objective and subjective conditions leads to a situation. We live in a series of situations and there is constant interaction between us, our environment and other people around us. This condition leads to various experiences that we learn from. Dewey defines our environment as "whatever conditions interact with personal needs, desires, purposes and capacities to create the experience which is had" (Dewey, 1938, p. 43). Similarly, Kolb mentions subjective and objective learning and that they 'interrelate and interpenetrate' in very complex

ways (Kolb, 1984, p. 35). Kolb insists this transaction is a 'fluid, interpenetrating relationship between objective conditions and subjective experience, such that once they become related, both are essentially changed' (Kolb, 1984, p. 36). In addition to the interaction between person and environment, social and cultural norms play a very important role in shaping our learning. This is because learners do not exist independently (Boud & Walker, 1993). External norms are deep-seated in our language and in concepts that we depend upon to make meaning out of our experiences.

The characteristics of learning above state that learning is an active, continuous process stimulating inquiry and building skills. This concept vehemently opposes the traditional education system that presents learning in a closed, teacher to student hand-down system. According to various scholars, old experiences always leave a mark on the individual and essentially leave her changed. This then influences all her present experiences. Another complex relationship is that which is formed through the subjective and objective transaction between the individual and her environment. This relationship also depends on various factors that the individual is surrounded by and what goes on internally, both consciously and unconsciously: environment, social and cultural norms, current mood and emotions, people around and many other factors, including genetic make-up. This makes learning a holistic process.

The next section aims to explain experience and learning based on different perceptions that different individuals carry based on their previous experiences. Learning involves transaction between the person and the environment, influenced by the socio-economic context in which it occurs and also depends on the perception of the individual who will experience an event like no other individual will.

2.5.1. The role of perception in learning

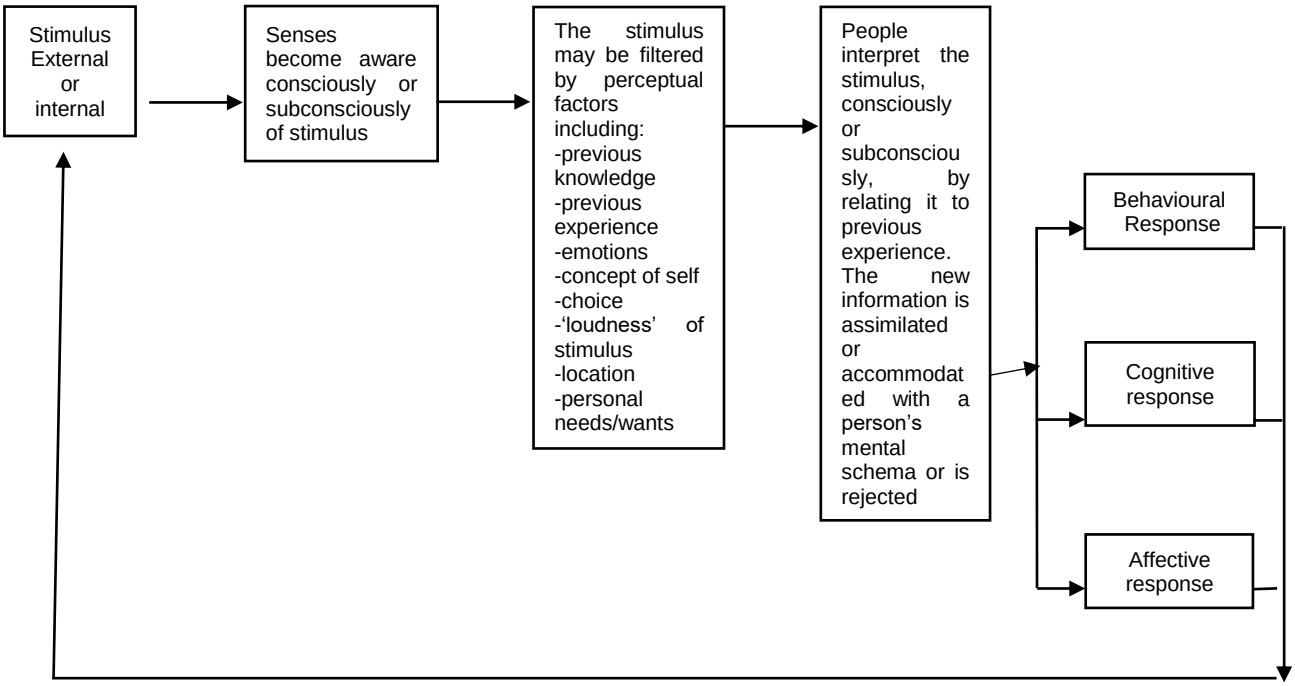
Beard and Wilson (2006) agree that experience is the basis of learning. However, they also claim that all experiences do not lead to learning. If an experience leads to the confirmation of a previous idea or theory, then this experience will be interpreted as supporting the existing cognitive status quo and little attention will be paid to it. If no attention is paid to the experience, then there will be no learning. Without the reflection on the what, the how and the why, the experience will merge with the background of

other experiences or stimuli in our daily lives. The various stimulants present around us gain our attention based on their ‘loudness’, how interested we are in them and when compared to other competing stimulants. As our brain carries on the responsibility of filtering these stimulants based on their relevance to us, both consciously and unconsciously, it is also striving to avoid overloading of information. Mental blind spots are then created by these cognitive filters which are part of our mindset and character and hence, we may turn oblivious to something that is present right in front of our eyes.

Importantly, according to Beard and Wilson (2006), even if two people receive the same stimulus at the same time, they do not necessarily respond in the same way. Kuhn (1970) explained that two people may look at the same object and receive the same stimuli, but the sensations they go through may be very different owing to differences caused by education, experience, etc. An experience is multi-layered, multifaceted and inextricably connected with other experiences, as opposed to the misconception that an experience is singular and unlimited by space and time. They go on to explain that when an individual has an experience, it leads to the understanding of feelings that might arise from it and then the individual re-evaluates the experience. This is followed by the process of association wherein a single aspect of the experience is associated with a previous experience and learning, leading to the integration of the new learning with that of an old one. The validity of the new learning is tested in some way and then appropriated or accepted by the learner. This is a complicated process which is not time and space bound. Boud et al. emphasise that an individual is aware of certain elements of the world and oblivious to certain others. Most importantly, as mentioned previously, in most cases, we accept and neglect a lot of information around us unconsciously. A lot of this comes from our perception of external and internal stimuli (Beard and Wilson, 2006).

Figure 2.3 explains the complex process of perception and the method of interpretation and response to external and internal stimuli Here, the perception process model (Gibson, Ivancevich, & Donnelly, 1985) is combined with the Information/cognitive processing model (Massaro & Cowan, 1993) by Beard and Wilson (2006).

Figure 2.3. Perception and Experiential learning (Beard and Wilson, 2006)



Our senses first consciously or unconsciously acknowledge the stimulus. We may notice a stimulus around us both consciously and unconsciously, but the moment we are aware of a stimulus we filter and interpret it. The filtering process depends on various factors, such as previous knowledge, previous experience, emotions, our concept of self, choice, the loudness of the stimulus and personal needs. Then we proceed to understand the stimulus to assess whether or not it is compatible with our existing mental constitution. If the experience is predicted, then there will be no change to our current mental construct. On the other hand, if the experience seems different then we make changes to our mental framework and assimilate the new experience. Alternatively, if the experience is so alien to our expectations and ways of seeing the world, we may reject it as being atypical, biased or incorrect (J. Piaget, 1950).

After having an understanding of experiential learning and how it could connect traditional and progressive learning, I am now looking at where this learning could occur. How can a certain environment affect learning in a specific way to bring traditional and progressive learning together? Where can this learning be situated? As my case study is Forest Schools, the following section explains how learning situated in a specific environment can influence the learner and the learning.

2.6. Summary of the chapter

The ‘battle’ between the traditional and progressive learning has been on-going for well over a century. When progressive learning was introduced as an exciting, modern and effective way of learning, traditional education was portrayed as boring, old and ineffective. Many scholars have debated such issues for years. Dewey, however, was clear that there need not be one or the other but could combine the attributes of both. The aim in either case should be education, and the key question: what is being learnt?

Dewey emphasises on experiential learning as significant, whether the theories and abstractions are learnt at school, through experiences by the learners outside the classroom or during their day-to-day activities. When learners experience an event, it makes them form a theory. This theory may or may not fit other theories already formed through experiences in the past. Therefore, an adjustment is made by either replacing or compiling previous and current theories. In this manner, Dewey and many other scholars such as Piaget and Lewin have argued we can understand how learners may learn better. However, learners experience the same event differently because of different perceptions they carry. Therefore, different theories could be formed by different learners at the same time whilst experiencing the same event.

Chapter 3: Environmental Education

3.1. Introduction

This chapter moves forward with the literature review of the study. The case study of my research, Forest School, provides an experience to the learners situated in a specific woodland at a given period of time. Therefore, the chapter also looks at the concept of situated learning (section 3.2) and how environments can affect learning. Following this, section 3.3 explores the idea of environmental education and describes the three types: education *about*, *for* and *in* environment. One of my key aims is to observe the bond children readily create with their environs and their emotional responses there.

The final section (3.4) of this chapter attempts to rationalise outdoor learning, discussing its different types and the importance of learning outside the classroom. At the end, I have attempted to consolidate and connect all the theories I have discussed in chapter 2 and 3 in Figure 3.3.

3.2. Situated Learning

Based on theories by scholars such as Vygotsky and Dewey, in the 1990s, Lave and Wenger developed an instructional approach to learning called situated learning. Situated learning claims that students are more inclined to learn by actively participating in the learning experience. They are 'situated' in the learning experience and hence, knowledge acquisition becomes a part of the learning activity, its context, and the "culture in which it is developed and used"(OTEC, 2007). This theory is significant as my study sees the environments as 'situated' and learning as a complex process consisting of formal and informal experiences, including those in the immediate environment.

Lave and Wenger (1991) argue that conventional learning is defined as a process by which a learner internalises knowledge which is either "discovered", "transmitted" from

others or “experienced in interaction” with others. This process, in Lave and Wenger’s view, is problematic because it considers the learner as a “non-problematic unit of analysis” and establishes a rigid difference between inside and outside. This makes learning largely cerebral and leaves the nature of the learner, the world and their relations unexplored. Learning becomes the act of transmission and assimilation. On the other hand, if the learner is conceived as a whole person in the world, then learning becomes a continuously evolving and renewing process. In other words, learning is the result of inherent and socially negotiated meaning and the intentions and interests of the learner in action (Lave & Wenger, 1991). This theory also states that there is a relation between learning, knowing and thinking which are culturally and socially influenced. Socially constituted knowledge is open ended and therefore, produced, reproduced and transformed in the course of an activity or several activities by the learner. Hence, participation dissolves the difference between inside and outside. It forms the basis of situated negotiation and renegotiation of meaning in the world (Lave & Wenger, 1991) and therefore, indicates that understanding and experiencing go hand in hand and are mutually constitutive. This is similar to Kolb’s (1984) claim that a learner must observe and reflect at the same time.

Learners develop their own meaning and construct their knowledge through experiences in the learning situation. Learning also depends on previous experiences and the unconscious action of challenging others’ perceptions. This implies that the relationship formed between participants and the physical activity itself has a great influence on how and what students understand. According to Stein (1998), because situated learning brings students together in cooperative activities and challenges their critical thinking and kinesthetic abilities, they should also be applicable and transferable to their homes, communities, and workplaces. Hence, when learning occurs in relation with the teaching environment then day to day activities of real life could create meaning as well (Stein, 1998). In situated learning, a student’s role changes from being a novice learner to being an ‘expert’ in the situation as they spend more time immersing themselves in the activity and interacting with the rest of the participants. Learning often is “unintentional rather than deliberate” (OTEC, 2007). Therefore, as a community the students mature together and learn collaboratively as

they share the purposeful and patterned activity (Lave and Wenger, 1991). The following are examples of situated learning activities[14]:

- Field trips where students actively participate in an unfamiliar environment.
- Cooperative education and internship experiences, in which students are immersed and physically active in an actual work environment.
- Music and sports (physical education) practice which replicate the actual setting of these events, e.g., orchestras, studios, training facilities.
- Laboratories and child-care centers used as classrooms in which students are involved in activities, which replicate actual work settings.

Furthermore, Lave and Wenger (1991) have claimed that independent learning leads to identity formation in students. If a learner is perceived as a cognitive entity then learning is a “non-personal” view of knowledge, skills, tasks and so on. On the other hand, when participation of the learner is considered significant then learning is both a subjective and an objective process. The learner here is considered a whole entity in the environment that she is in and therefore, knowing and learning is an activity by that specific individual in a specific situation or environment or condition that she is part of.

Lave and Wenger further explain that activities, tasks, functions and understandings do not exist in isolation. They are part of broader systems of relations in which they have meanings. These systems are reproduced and developed within social communities and therefore are part of the people of those communities. Hence, learning implies a process of becoming a different person, which is enabled by these systems of relations. Learning means evolving identities that are long-term, between individuals and their places and communities and participation in their communities.

Under the concept of situated learning, Lave and Wenger (1991) also introduced the model of “Community of Practice” (CoP). A community of practice is formed when a group of individuals share craft, skill or knowledge from a set of relations among them, the world around them and with time. A CoP can evolve naturally because of the members' common interest in a particular topic or subject, or it can be created

[14] http://www.niu.edu/facdev/_pdf/guide/strategies/situated_learning.pdf

deliberately with the goal of gaining knowledge related to a specific field. It is through the process of sharing information and experiences with the group that members learn from each other, and have an opportunity to develop personally and professionally (Lave & Wenger 1991). The community serves the purpose of learning and provides support to the members in meaning making.

Take as an example of community, a school where children learn Science. Here Science is reproduced for school children to understand, but not a replica of how a community of scientists would. Science is simple and relatable for the age group, combined with certain simple practical experiments and activities that the age group of students can perform and relate to. Therefore, knowledge is not replicated or instructed, but created through “centripetal participation in the learning curriculum of the ambient community” (Lave and Wenger, 1991, pp. 100). In other words, students come together to engage and learn in their immediate environment, facilitating the questions and queries to be satisfied by the community itself as it develops over time. In order to understand the position of Forest School in the realm of environmental education the next section explores three key aspects of environmental education; *about*, *for*, *in*.

3.3. Environmental Education

Environmental education (EE) is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help resolve these problems and motivated to work toward their solution (Stapp et al., 1969).

EE is inter-disciplinary, multi-disciplinary and super-disciplinary and is about values, attitudes, ethics and actions. According to Davis (1998), EE is not to be considered a subject or an add-on to a subject. It is a way of thinking and a way of practice.

For example, under the Australian EE system the three overlapping approaches are education *about, for* and *in* the environment. The first approach, education *about* the environment, encourages the learners to understand how the environment functions; the complexity and working of natural systems and how humans and nature interact. Education *for* the environment turns more political in its dealing with the topic. This

approach is about the social critique and social action for change. The aim of this form of education is to deliver “the values transformation necessary to promote sustainable and socially just life style choices” (WPEE, 1993, p. 23). Education *in* the environment provides direct experiences with environments and seeks to develop positive feelings and attitudes towards nature. This also aids in fostering empathy and to explore environmental conflicts and issues practically.

Zandvliet (2013) claims that the concepts and approaches of EE need to be at the center of the school system in order for it to be effective. Similar to the concept of education *about*, *for* and *in* the environment; three general approaches have been described by Hutchison (1998) to conduct environmental learning. These approaches are based on the belief that environmental education is not a subject matter to be treated separately in curriculum but is interconnected with everything we do as humans (BCME, 2007).

- Supplementary approach: provides teachers with resources that might be useful in addition to their regular teaching. The resources are self-contained and require limited knowledge or preparation on the part of the teacher.
- Infusionist approach: combines environmental themes and topics within the curricular topics (for example, Geography, Science or Social Studies). The assumption here is that all education is environmental education (Orr, 1994) and hence, the environment becomes the organiser of an interdisciplinary curriculum.
- Intensive experience approach: employs a participatory method and takes students outdoors for short but immersive trips and experiences.

Research conducted in Bowen islands, British Columbia, in 2007 consisted of various stakeholders across the education system: the Ministry of Education, non-governmental organisations, students, academics and so on. Participants agreed that education *about*, *for* and *in* the environment can help students understand the systems of nature and hence the relations between them and the nature. This eventually provokes them to think and take positive actions for the betterment of the environment. It is hoped that in adopting an interdisciplinary approach to teaching about the

environment, students will be supported in understanding how their actions impact the environment at both local and global levels. Environmental consciousness connects to the children's experiences as a multi-sensory mode from direct experiences within nature-dominated environments. These concepts allow an examination of the complexity of the children's existential encounters with landscapes and places outdoors. In educational theory, John Dewey connected consciousness to how we create meaning. It is not only an individual cognitive process but is intertwined with re-thinking experiences and new interpretations of how we understand, as well as being related to social interaction (Dewey 1958, 1997). I see the child as an active agent creating meaning in interaction with other children and with the environment. I assume environmental consciousness to be of importance for children's agency, how they act towards and understand the environment. In the following section, I will further explore all three approaches of EE separately.

3.3.1. Education about Environment

According to National Curriculum Council (1990), this can be achieved though Geography, Science, Technology and History curriculum in schools. Environmental or ecological literacy (EL) has been further explained by various ecologists such as Garret Hardin. Hardin (1968) defined ecological literacy simply as a question "what then?"; which, in his opinion, is a key question to be asked before various species of animals get extinct or before climate change creates irreparable havoc. UNESCO (1989) conceives EL as a "functional literacy", which is the basic training available for individuals to independently meet the reading and writing demands placed on them. In this case, EL becomes a part of the rudimentary literacy skill set.

Education about environment is developing basic knowledge and understanding of the environment (NCC, 1990) through the following topics:

- Climate
- Soils, rocks and minerals
- Water
- Materials and resources, including energy
- Plants and animals
- People and their communities
- Buildings, industrialisation and waste (NCC, 1990)

This understanding of the organisation of ecosystems and applying these principles to live by is called environmental or ecological literacy. It is the fundamental understanding of 'how we interact with our environment' (Peacock, 2004, p. 15). School and curriculum are sources for developing the skills, knowledge, affects and behaviour related to the environment (Erdoğan & Ok, 2011).

Environmental literacy (EL) can be defined as "basic functional education for all people, which provides them with the elementary knowledge, skills and motives to cope with environmental needs and contributes to sustainable development" (Erdoğan, Kostova, & Marcinkowski, 2009, p. 16). Disinger and Roth (1992) emphasised that EL forms an ecological paradigm and defined it as:

> "The capacity to perceive and interpret the relative health of environmental systems and to take appropriate action to maintain, restore, or improve the health of those systems" (p. 17).

Based upon this understanding of EL, six key components have been assembled together as described by Simmons (1995); Volk and McBeth (1997):

- Ecological knowledge refers to the knowledge and understanding of major ecological concepts, principles and theories as well as knowledge and understanding of how natural systems work and how they interact with social systems.
- Socio-political knowledge includes an understanding of the relationship between beliefs, political systems, and environmental values of various cultures. Socio-political knowledge also includes an understanding of how human cultural activities (e.g. religious, economic, political, social and other) influence the environment from an ecological perspective. Also included within this category is knowledge related to citizen participation in issue resolution. It is often referred to as cultural literacy comprising knowledge of environmental action strategies.
- Knowledge of environmental issues includes an understanding of environmental problems/issues caused as a result of human interaction with the environment. Also included within this category is knowledge and

understanding related to alternative solutions to issues and to major sources of environmental information.

- Affect refers to factors within individuals which allow them to reflect on the environmental problems/issues at the interpersonal level and to act on them if they judge the issue/problem warrants action. It is expressed in the intention to act.
- Additional determinants of environmentally responsible behaviour include locus of control and the assumption of personal responsibility. Cognitive skills are those abilities required to analyse, synthesise and evaluate information about environmental problems/issues and to evaluate a selected problem/issue on the basis of evidence and personal values. This category also includes those abilities necessary for selecting appropriate environmental action strategies, and for creating, evaluating and implementing an action plan.
- Environmentally responsible behaviours include active and considered participation aimed at solving problems and resolving issues. Categories of environmentally responsible actions are persuasion, economic and consumer action, eco-management, political and legal action (Volk & McBeth, 1997, pp. 8-9) accompanied by strong conviction of personal commitment and responsibility. (Erdoğan et al., 2009)

  These components have been employed in the analysis of EL in schools by various scholars; for example, Babulski, Gannett, Myers, Peppel, and Williams (1999); Erdoğan et al. (2009). Erdoğan et al. (2009) has in fact further added that EL appears to comprise elements similar to environmental culture, consciousness and behaviour.

Furthermore, for an efficient and robust implementation of EL, Orr (1992) has suggested principles that might provide EL with a strong foundation along with formal curriculum. All education is environmental education: education as a whole can either emphasise upon current ecological conditions or ignore them. It can either inculcate environmental values or disregard them. According to Orr (1992), traditional education puts aside the fact that our existence dependents on nature. Therefore, frequently, students appear to be ‘devoid of sense of place or stewardship’ (Orr, 1992, p. 90).

Environmental issues are complex and cannot be understood through a single discipline or department: Orr suggests that interdisciplinary studies cannot occur in single-discipline institutions. A multi-disciplinary setting; for example, a laboratory; needs to be created that can provide opportunities for interactions across conventional disciplines to enhance Earth-centered education.

For inhabitants, education occurs in part as a dialogue with a place and has the characteristics of good conversation: Orr (1992) argues that “formal education is mostly a monologue of human interests, desires and accomplishments that drowns out all the other sounds” (pp. 90). It manifests a belief system that we are alone in an inanimate world of material, energy flows and biochemical cycles. But a true conversation can only occur when we acknowledge the existence of the other and define ourselves in relation to them. We must pay attention to and include the language of nature; the sounds of birds and animals and the ocean. This language is older than human speech and to understand this language, one needs to be patient and disciplined. A conversation has a structure and a purpose and the purpose here according to Berry (1987) is “What is here? What will nature permit here? What will nature help us do here?” It is a process of restoration and healing.

The way education occurs is as important as its content: Environmental education ought to change the way people live, not just how they talk. According to Orr (1992), traditional education does not steer children towards altering their relationship with nature, but teaches them to intellectualise and emote about nature. Therefore, Orr suggests that learning can best happen in situations demanding responses to real needs. “Real learning is participatory and experiential” (Orr, 1992, pp. 91), where the boundaries between teacher and students, school and community and between areas of knowledge are dissolved. In this mode of learning teachers are facilitators and students determine what is to be learnt and how.

Experience in the natural world is both an essential part of understanding the environment and conducive to good thinking: “Direct experience is an antidote to indoor, abstract learning” (Orr, 1992, p. 92). An experience that leaves a mark or makes the learner think, according to Orr, can help the learner observe surroundings better and understand the language of nature. Orr claims that experiences in nature can improve human intellect and creativity.

Education relevant to the challenge of building a sustainable society will enhance the learner’s competence with natural systems: Experiences with deep impact in the real

world can lead to friction between lessons learnt and real issues encountered elsewhere. The constant learning through experiences, in case of EL, can have practical bearings on sustainable living; for example, learners taking part in community projects to reduce and recycle waste.

Research across the world in the field of EL has so far seems to have shown a possible positive relationship between education about environment in school curriculum and environment knowledge and attitude. For example, a study by Cohen (1973) conducted with 454 high-school students in the US concluded that the more learners were exposed to information, the more positive was the environmental attitude. Alaimo and Doran (1980) conducted a study in one of the largest suburban schools in New York. The results of this study indicated that generally all students appear to have a high concern for environmental problems, especially the older students, which could be due to their Science curriculum containing discourse on environmental problems.

Similarly, according to Erdogan, Bahar, and Usak (2012), most of the attainments related to the environment at a high school in Turkey were cognitive in nature, related to environmental issues and problems. However, it was noted that having knowledge did not mean that the students were keen on protecting the environment. Therefore, the study noted that the method in which knowledge is imparted can have significant influence on its practical outcome. Recommendations included incorporating “modern, interactive and/or interdisciplinary techniques” (pp. 2233) in pedagogy. This comprised practical sessions and field trips contributing to development of responsible environment behaviour by acquiring the ways of living (Yerkes & Haras, 1997), environmental awareness (Howe & Disinger, 1988), environmental knowledge and behaviour (Erdoğan, Erentay, Barss, & Nechita, 2008). Similarly, the Bowen Island research (Zandvliet, 2013) concluded that having an integrated environmental learning may promote change in attitudes of students by providing them with more and varied opportunities to investigate and explore various relationships in nature. According to Zandvliet (2013), Canada had aimed to provide students with integrated concepts and principles of the sciences and social sciences, such as ecology, biogeography, sociology, environmental chemistry, environmental psychology, politics, and economics under a single interdisciplinary framework as part of its EE. The aim here was to utilise the traditional subjects to connect students with the natural environment. This involved direct experiences in both natural and man-made settings, eventually inculcating an understanding in the students that the development and continued

survival of all human environmental, societal and cultural aspects are deeply embedded and dependent on natural systems.

Zandvliet (2013) goes on to say that

> "Participants in the consultations on Bowen (and elsewhere) concurred that knowledge from a broad range of scientific disciplines contributes to a well-rounded understanding of environmental issues. However, they also stressed that there must be awareness that knowledge is not static and that theories can change. Knowledge from the sciences, economics, politics, law, and sociology were also viewed as vital to the study of complex systems and human interactions. Through studying cultural systems and global issues, students may begin to see the relationships between the environment and human rights, justice, race and gender equity. Other cultures in the world present diverse perspectives on ways of valuing and relating to natural and human-created environments. In developing a thorough understanding of systems, students can examine the origins and impact of their present worldview and analyze the implications of new information and changing societal values". (Zandvliet, 2013, p.10)

Environmental literacy is a basic but also a broader understanding of how humans and nature are related to and dependent on each other and how we might co-exist sustainably. Various studies have claimed that education about the environment (and nature as part of traditional school subjects) provides a good foundation to environmental consciousness. Zandvliet has further emphasised that making EE interdisciplinary will provide students with a broader outlook to environmental problems, which also includes political, economic and cultural aspects across the world. This claim opens this discussion wider than the scope of this study. However, at this point I would like to make a note of various perspectives and approaches to environmental issues presented by various scholars; for instance: gender equity, race and human rights; and then bring back the focus on why do we need environmental literacy and what is the best possible method to approach it?

3.3.2. Education for Environment

Continuing the discussion about environmental education from Chapter 1, I would like to reiterate that there is no more difference between developing countries or otherwise when it comes to environmental problems (K. Quadri & Sambo, 2011). According to Quadri and Sambo, environmental issues have become our 'common heritage'. Therefore, there is an increased sense of clean environment to be part of human rights and further research to make education effective[15]. Going back to various scholars who insisted on education as the foundation of a sustainable future, L. Barraza , A. Duque-Aristiza´Bal, and Rebolledo (2003) have suggest that environmental educators in the UK supported EE to provide people with a different perspective to the "complexity and 'messiness' of environmental issues in current times of continuous change."(p. 349) To that point, Trefil had stated: "if you don't know about something, you don't value it" (Pool, 1991, p. 266). Therefore, if students do not know about their natural world, they will not value it and similarly, will not commit to learning about it to save it (Smith-Sebasto, 1997). They may not even know what it is that they are aiming to save. Learning the alphabet and numbers is believed to enable children to read, write and compute, which is then advantageous for their growth and well-being. Then, not learning environment literacy puts them, as a species, in a very disadvantageous position (Smith-Sebasto, 1997). Turner (1998) argues that education for the environment recognised as education for sustainable future came about much later. Huckle (1999), for example, perceives education for sustainability as the basis for a radical ideological stand that 'seeks to expose contradiction, ideology and politics, and allows learners to glimpse genuinely democratic and empowering meanings' (Huckle, 1999, p. 40).

According to J. Fien and Parker (2010), the ESD Lens (ESDL) was created to review Decade of Education for Sustainable Development. The lens consists of a set of 13 review tools in order to reorient formal education towards sustainable development. As an initiative of DESD, the lens is to provide a new set of eyes to look at the current education system. The tools consist of four modules: planning and preparing the Lens review; reviewing national policy; reviewing quality learning outcomes; and reviewing practice, and are addressed to a variety of potential users. According to Tilbury (2011),

[15] http://web.unep.org/divisions/delc/human-rights-and-environment

the review of DESD can be set to question the: a) commonly accepted learning processes that are aligned with ESD and should be promoted through ESD activities and (b) ESD and related learning opportunities that contribute to sustainable development. In the end, Huckle and Wals (2015) have claimed that the DESD has been "business as usual"[16]. With the UN contributing and promoting sustainable education, the onus seems to also lie with the national and state governments and agents to promote and act appropriately upon the set goals. The question remains as to what will facilitate the learning and understanding of the current environmental problems. The following section dwells upon the prospective responsibility that education *in* environment caries to promote and facilitate environmental education.

With growing concerns over climate change obvious on media and various groups of activists forcing the public and the government to think about environmental actions and policies; including school students demanding more affirmative attention from Governments, the UK Government confirmed a 25-year Environment Plan in early 2018. The plan sets key achievements "to help the natural world regain and retain good health". There are five chapters or actions to be taken by the government to reach its goals and chapter 3 states that the aim is to connect people with the environment to improve health and wellbeing. It seems like especially after Brexit, the government set out to adopt a more environment friendly approach to reclaim and reform agricultural and other natural resources. Under chapter 3 in the plan, Forest School has been cited to provide encouragement to children to explore and have a relationship with nature in the outdoors. Additionally, it has been mentioned that the science and geography curriculum supports students further with field work outdoors. The plan also mentions learning and playing outside of the classroom as a key element of childhood and to this effect the government set aside £10m to support outdoor activities in schools. The significant aspect of this chapter in the plan is to support more students in engaging with local natural spaces. The government has discussed supporting the schools and Pupil Referral Units to take students on field trips, outdoor visits and spaces to bring together 'learning and feeling healthier and happier', especially working with disadvantaged areas and introducing 'progressive programmes of nature contact' with students and including the expanding of school

[16]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf

outreach activities to nearby wooded areas and national expansion of care farming by 2022.

3.3.3. Education in Environment

According to Turner (1998), EE originally took shape during the age of political emancipation in the 18th century when there was need for the population at large to be well educated. Starting with Germany which saw the rise of Realschule or 'realist schools' in mid-18th century. Unlike the more academic Gymnasium, Realschule focussed on practical work in secondary school. It dealt with real life and real objects that brought children in contact with things which were educational in the broader sense. Though Realschule was later criticised for its classroom-based approach towards education[17], it was the one of the first systems in the modern era that considered education in the environment.

Similarly, Rousseau is one of early philosophers who emphasised on individuals educated by nature, as a part of the environment, to be whole and better people[18]. Though Rousseau too encountered criticism for undermining formal education, he is considered as one of the prominent educators who was part of the progressive education movement. Similarly, Pestalozzi[19] also emphasised on children experiencing nature and its objects to come to an understanding of how it functions, and that leads to a process of self-learning. Pestalozzi's' student Froebel[20] introduced the concept of Kindergarten where practical activities and direct use of materials were part of education in the early years. He believed that children should be encouraged to use their senses in nature, as that would help them understand their place in the world; initially local and eventually in a broader sense.

Eventually, the concept of education in environment took shape based on the idea that schools should not be cut off from the environment around them (Turner, 1998). Education here is extended to natural environments outside the classroom. For example, Dewey claimed that a child who learned about the river in her town in

[17]https://www.theguardian.com/teacher-network/2015/nov/25/what-can-we-learn-from-the-great-german-school-turnaround
[18] http://infed.org/mobi/jean-jacques-rousseau-on-nature-wholeness-and-education/
[19] http://infed.org/mobi/johann-heinrich-pestalozzi-pedagogy-education-and-social-justice/
[20] http://infed.org/mobi/fredrich-froebel-frobel/

Geography at school, might not associate her learnings with the river itself. He (1998) believed in the power of experiences in facilitating learning. Similarly, Turner (1998) claims that 'learning by doing' is one of best methods of learning and children are taught and prepared to exercise control over their own actions. This eventually leads to being active citizens with interests in political and social change. Therefore, World Education Fellowship firmly believing in education extending beyond the classroom walls and helping children understand the natural environment and also the political and social environment does make sense (Turner, 1998).

On the other hand, education in the environment can also be interpreted as providing a certain environment within the classroom. Maria Montessori devised an environment within the classroom that is educative in itself. The focus here is on the senses and feelings that would then address the intellect of the child. Introduction of this method in the late 20th century must have been a revelation to educators that children must be provided with a classroom environment which is specifically prepared for them and that incites curiosity (Turner, 1998). This environment is measured in many ways but not controlled by adults. For instance, the tables and chairs are fit for the purpose of a certain age group. Children touch, feel and learn on their own and answers are provided by adults when asked for. They are free to learn in their own world, designed specifically for them. Learning, according to Montessori, is like climbing a ladder wherein children choose their own activities and keep learning as they move up the ladder[21].

Thus, introducing children to the natural world and exposing them to environment literacy could lead to children growing up to being more conscious about their decisions and their impacts on the nature. Otherwise, to an adult who has never been sensitised towards the environment and cannot even identify trees in her own backyard, the decision to choose between paper and plastic bags could seem like a herculean task (Smith-Sebasto, 1997). Having knowledge does not necessarily lead to affirmative action towards local and global environments. The manner in which knowledge is transmitted or embedded has a major influence on potential reflection and action thereafter.

[21] http://infed.org/mobi/maria-montessori-and-education/x

With the focus on outdoor education, I will now discuss the significance of education outside the classroom and within the natural environment, which has proven to be useful in the mental and physical development of children. According to Department of Employment and Education, United Kingdom (DfEE, 1995), outdoor education with its focus on life skills, travelling and learning outdoors, has close connections with environmental education because prolonged exposure to nature makes young people aware of their environment and develops knowledge and understanding of it.

3.4. Outdoor Learning

Outdoor education has various definitions based on the aim of the activities, locations, processes and/or purposes (Potter & Dyment, 2016). Scholars like Nicol (2002) have suggested that outdoor learning 'defies' definitions (pp. 32). However, historically it is noted that outdoor learning concentrates on the role of nature, risk, adventure, skill development and social and interpersonal development. Gair (1997) described outdoor education as educational activities in the open air whether in an urban or a rural setting or whether in a cultivated or a wild environment. It provides students with opportunities for personal, social and educational development through challenging activities in the natural environment, while catering to a better understanding of a subject or a topic (Bradford Council Directorate of Education, 1994). On the other hand, contemporary theories include the ideas of place, environment, sustainability and social change. The development and knowledge expansion are based on the multi-disciplinary theory and create meaningful growth opportunities to foster the knowledge and skills of outdoor activity, personal development and environmental sustainability. According to Higgins (1995), outdoor education is education 'in' the outdoors (outdoor activities), 'through' the outdoors (personal and social development) and 'about' the outdoors (environmental education). It cuts across various areas of the curriculum and therefore, supports many subject areas (Beames, Atencio, & Ross, 2009). Higgins' explanation of outdoor education appears to be very similar to the description of environmental education (education *about*, *for* and *in* environment). This

similarity will be one of the theoretical associations that I will be employing in my research and deliberating further.

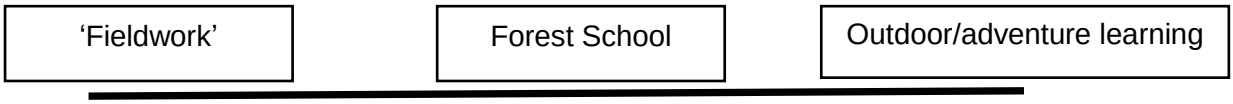
For the purpose of this thesis, the definition for outdoor education will be as per the Outdoor Education policy (1994) by Surrey County Council (SCC).

> "Outdoor education provides a framework for acquiring knowledge, concepts, values and skills through learning, living and moving out of doors; involves a delivery of education which transcends subject boundaries, forging links with a variety of individual disciplines, offers the opportunity to develop awareness, understanding and responsibility for self, group and the environment, thus enhancing the quality of life; is for all regardless of race, creed, gender, disability or social disadvantage" (SCC, 1991, p. 1).

According to the above definition, Gair (1997) states that outdoor education encompasses a wide variety of activities. On one end is the outdoor studies catered in schools by subjects such as Geography, Science and History. Outdoor studies are also outlined by direct observation as part of fieldwork, which may also require exploration in the wild or in the countryside. Based on two separate longitudinal studies conducted in Scandinavian primary schools by Jordet (2007) and Mygind (2005), it was concluded that outdoor learning can be applied in all subjects to support personal and social development: nature, risk, adventure, skill development and social and interpersonal development. Dolan (2016) claims that outdoor education nurtures an essential foundation to build a sense of care for the environment and can also integrate various features of the primary curriculum; for example: Geography, History, science, Language and Mathematics.The other end of the spectrum is outdoor adventure learning, such as, hiking, canoeing, caving, etc. Some outdoor learning enthusiasts argue that outdoor learning must occur within the natural surroundings of the children in order for them to connect with it and not in faraway localities. However, in case of outdoor adventure learning activities the location of the activity depends on the objectives of the activity; whether for leisure or aim based learning.

Figure 3.1 shows the outdoor education spectrum with fieldwork and outdoor adventure learning at each end. For the purpose of my study, I am placing Forest School in between the two. The concept of Forest School will be explained in the next chapter; however, at this point I would like to add that Forest School is a series of planned outdoor learning sessions that are also participant led.

Figure 3.1. Outdoor education 'spectrum'



Many a time, the focus of outdoor activities is the process by which students learn in a more self-directed manner (Gair, 1997). This has an impact on the roles of both the leaders and the learners. Experiences by the learners are through planning, discovery and reflection which is contrary to the method of learning through directions from leaders. Gair states that even though there is no single definition to outdoor education, the physical and mental health advantages of participation have been widely acknowledged. For example, the Duke of Edinburgh's Award, in its Expedition Section, states that the outdoor adventure learning for youth leads to a wide variety of benefits:
Demonstrate enterprise;
Work as a member of a team;
Respond to a challenge;
Develop leadership skills;
Recognise the needs and strengths of others;
Make decision and accept the consequences;
Plan and execute a task;
Reflect on personal performance;
Enjoy and appreciate the countryside[22].

Similarly, according to RSPB (2006), "research has shown that children who have been introduced to their local environment and understand how to look after it, who

[22] http://thescoutnetwork.co.uk/awards/dofe/

have a practical grasp of our shared history, are more likely to develop into active citizens in later life, giving and receiving more from their community and practicing in democratic society". Additionally, "It has also been proven that children with learning disabilities are better outside the classroom" (RSPB, 2006, p. 4).

Dolan (2016) has suggested that outdoor learning corresponds to 'place-responsive pedagogy'. 'Place-responsive pedagogy' was proposed by Mannion, Fenwick, and Lynch (2012). It is about 'considering how educators make explicit efforts to collaborate in assembling people, places and purposeful activities together, to produce viable and valuable environmental educational experiences' (p. 2). Wattchow and Brown (2011) claimed that 'place is suggestive of both the imaginative and physical reality of a location and its people, and how the two interact and change each other' (p. xxi). Place, therefore, appears to be more than a physical environment as it derives its meaning through people's interactions with it (Dolan, 2017). Waite and Pratt (2011) claim that places and spaces are socially constructed and spaces have different associations for children. The history and particular meaning attached to spaces keep changing constantly based on experiences in those spaces and therefore turning them into 'places'. Place, on the other hand, can be described as a complex phenomenon (Dolan, 2017). They can be local, immediate and concrete, such as a child's home or her school and the school grounds, or places can be far away and abstract, for example, continents. Scoffham (2013) has envisaged 'place' in three dimensions based on different scales and time frames. He claims that place can be viewed historically; what has happened here? Contemporarily; what is happening at present? And futuristically; what will this place look like in the future? A place can also be viewed under social, cultural, political and physical. Scoffham also insists that a place can be re-created in our imagination. Developing a connection with place has been marked as one of the key aspects in development outcomes (Higgins, 2009). This includes thoughtful actions emerging from the understanding of consequences, citizenship and care.

Place-based education can be defined as "an educational framework that emphasises role of teaching and learning in nearby places, hence connecting schools with the community and society" (Dolan, 2017, pp. 54). Hutson (2011) has further attributed place-based education to an increase in environmental awareness and

connectedness. According to McInerney, Smyth, and Down (2011) by adopting place-based education, schools then create opportunities for students “to learn about and care for ecological and social wellbeing of the communities they inhabit and the need to connect schools with communities as part of a concerted effort to improve student engagement and participation” (p. 5). It is also hoped that place-based education might convert youngsters to producers of knowledge from consumers of knowledge and in turn enable them to participate in democratic processes.

A case study by Kangasa, Kopistob, Löfmanb, Salob, and Krokforsb (2017) of a fifth-grade pupil and her agency or power to act under different learning environments claims that outdoor activities provide more independence and locus of control to learners. Locus of control is the psychological attribute of individuals which characterises the perception of control over one’s life (Rotter, 1954). Persons with an internal locus of control perceive that control over a situation lies within them and persons with external locus of control perceive that control lies on an external entity, for example: God, fate, luck, etc. Kangasa et al. (2017) developed initiatives based on the students’ responses during a study in three different scenarios; classroom, vegetable garden and a farm (Table 3.1)

Table 3.1

Initiative classification framework (Kangas, 2017, pp. 85)

Initiatives	Key Features
Complementing initiative	A pupil shows engagement by asking questions or by bringing something new to the situation. However, the new element is part of the ongoing action (does not change the course of the action)
Supportive initiative	A pupil’s action aims at supporting the actions of another child or teacher (e.g. encouraging others, answering questions, doing what is asked, following instructions)
Constructive initiative	A pupil brings a qualitatively new idea, thought, suggestion or question to the situation

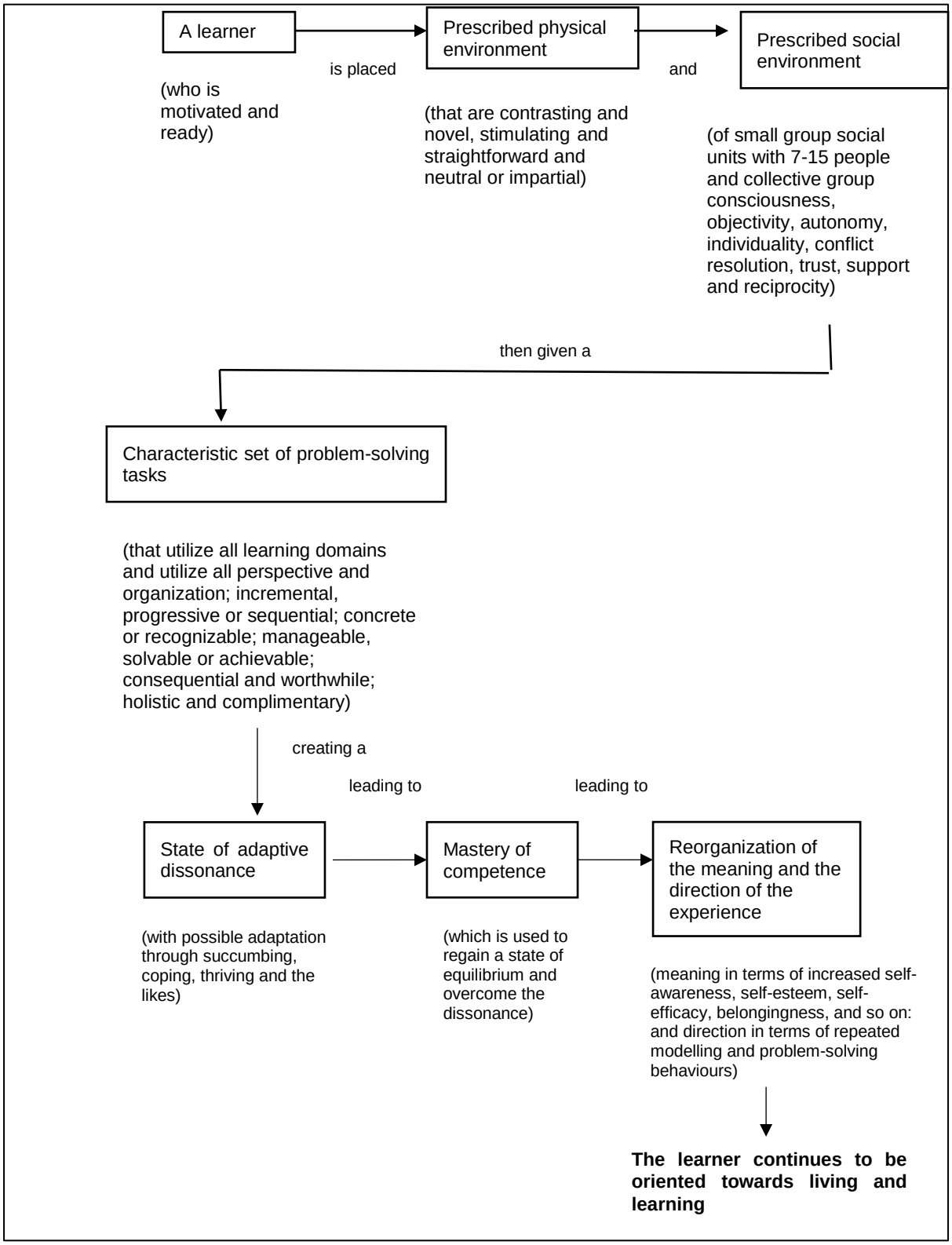
Challenging initiative	A pupil questions the ongoing action and gives a new option or suggestion

The study concluded that learning was more pupil-centred in the vegetable garden and the farm than in the classroom. The findings of the research have been categorised into four scenarios. The openness in the second two scenarios enabled the participant to take more responsibilities. This particular study stated that the physical learning environment should be considered as an "entity of physical, social, cultural, emotional and pedagogical factors that influence learning" (Kangas, 2017, p. 86). As the teachers trusted the pupil and gave more freedom, the pupil moved from complementing initiative to challenging initiative.

In support of the above claim, the Outward Bound Process Model (OBPM) (Walsh & Golins, 1976) explains the probable effect of outward bound programmes. Outward bound programme aims at personal and social development through challenging outdoor activities. According to OBPM (Figure 3.2), a motivated and ready learner who is placed into prescribed physical and social environments, when given a characteristic set of problem-solving tasks, creates a state of adaptive dissonance leading to mastery or competence. This in turn leads to reorganisation of the meaning and direction of the experience. In this way, the learner continues to be oriented toward living and learning[23].

[23] http://www.wilderdom.com/theory/OutwardBoundProcessModel.html

Figure 3.2. Outward Bound Process Model (Walsh & Golins, 1976)



To elaborate the OBPM further, Rickinson et al. (2004) have described the impacts of engaging children in out of classroom activities under four categories: cognitive impact, affective impact, social/interpersonal and social behavioural skills (Rickinson et al., 2004). Table 3.2 takes us into the social and cognitive impacts that outdoor education under fieldwork and adventure learning can have on participants.

Table 3.2

Significance of Fieldwork and Outdoor Adventure Activities (Rickinson et al., 2004)

Mode of engagement	Cognitive impact	Affective impacts	Social/interpersonal skills	Physical/behavioural skills
Fieldwork	Positive cognitive and affective learning. (Nundy, 1999) More efficient in developing cognitive skills than classroom learning. (Eaton, 2000) Improved ecological knowledge. (Milton, Cleveland, & Bennett-Gates, 1995) Developing team work, sense of ownership and internalisation of knowledge.	No strong, evidence-based claim available for attitudinal impacts or changes.	Improved social skills. (Milton et al., 1995) Positive impact on co-operation skills, leadership qualities, perseverance, reliability, initiative and motivation. (Nundy, 1999) Increased self-confidence, self-esteem and team working skills. (NEF, 2004)	'Students could be provided with additional tools to make responsible environmental decisions by means of a combination of first-hand experience, participatory interaction, adequate preparation and subsequent reinforcement' (Bogner, 1998, p. 27)

Outdoor adventure education	Possibility of academic success through outdoor learning. (Fox & Avramidis, 2003) Limited knowledge on impact of outdoor learning on environmental awareness.	Improved self-esteem, self-concept and locus of control. (Reddrop, 1997) Effects on independence, confidence, self-efficacy and self-understanding. (Hattie et al. 1997) Improvement in self-esteem, leadership skills and confidence. (Thom, 2002) Decision – making, problem-solving and interpersonal skills (Clay, 1999). Greater use of strategies such as: 'Focus on the positive', 'Seek social support', and 'Focus on solving the problem'. (Neil & Heubeck, 1997)	Impact on social skills.(Hattie, Marsh, Neill, & Richards, 1997) Improved leadership and communication skills. (Thom, 2002) Decreased loud and aggressive behaviour. Increased group cohesion and willingness to participate in group activities. (Farnham & Mutrie, 1997) Better same sex and inter-sex relations. (Purdie & Neill, 1999)	Behaviour during outdoor activities to be more mature. (Clay, 1999) Promoting positive behaviour (Fox and Avramidis, 2003)

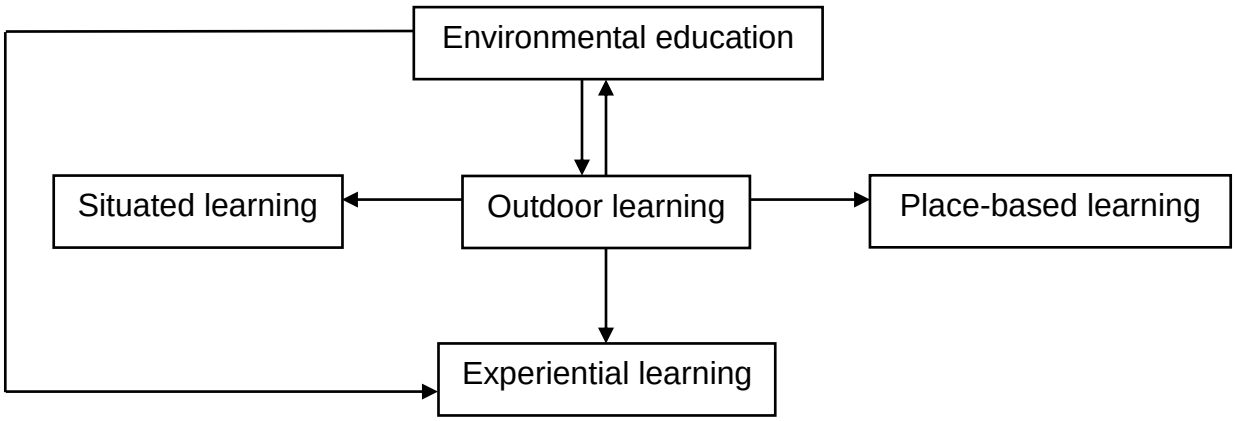
Rickinson et al. (2004) claim that fieldwork has a very positive impact on the cognitive development of participants leading to improved classroom learning and ecological knowledge. Additionally, development of teamwork, sense of ownership and internalisation of knowledge have been observed. On the contrary, there is limited knowledge on impact on cognitive development by outdoor adventure learning. Under attitudinal changes or affective impacts, there is limited knowledge on the impact

through fieldwork. However, outdoor adventure learning shows improvement in self-esteem, self-concept, confidence, self-efficacy and self-understanding.

Under social/interpersonal skills both fieldwork and outdoor adventure learning have been shown to enhance social skills, leadership and communication skills and increased group cohesion. In fact, outdoor adventure learning has also proven to decrease aggressive behaviour, greater use of strategies and improved problem-solving and decision-making skills in students. In the last category of social/behavioural skills, both fieldwork and outdoor adventure learning have shown improvement in mature and positive behaviour (Rickinson et al., 2004).

The literature review for my research draws from various theories and concepts surrounding outdoor and experiential learning to facilitate environmental education. I will now attempt to connect all the theories discussed above in Figure 3.3.

Figure 3.3. Theories underpinning my research



The above figure explains the manner in which I see the theories underpinning my thesis connecting with each other. By taking environmental education outside of the classrooms, it contributes to outdoor learning and similarly, outdoor learning can contribute to environmental education by including the aspects of learning about the environment and nature out in the open. Both situated learning and place-based learning form the foundation of outdoor learning as the learning is based on and influenced by the situation and place the learners are in. Outdoor learning contributes to experiential learning through various planned activities, but also by the virtue of being outside the classroom. In the end, environmental education when conducted outside can contribute to experiential learning.

3.5. Summary of the chapter

The attempt to connect the various theories in this chapter is to support learning outside the classroom to facilitate environmental education, as the key factor affecting learning may be the place where it is situated. Since Forest School is conducted in woodlands and stresses the importance of experiences and environmental literacy, it could have enormous benefits through the theory of situated learning. Environmental education can be *about, for* and *in* the environment. Using the principles of Forest School, environmental education could be planned and taught differently. Whether formal curriculum-based learning in classrooms, or learning in the outdoors, environmental education needs to embrace both. Just as outdoor learning spans from strict aim-based fieldwork to open outdoor adventurous learning, the concept of Forest School perhaps needs to see itself as positioned on such a spectrum of experience. Forest Schools is discussed in detail in the next chapter.

Chapter Four: Understanding Forest School

4.1. Introduction

This chapter looks into the various aspects of the concept called Forest School. Section 4.2 discusses the history of Forest School, followed by section 4.3 which introduces the concept itself. Section 4.4 is crucial in terms of understanding the pedagogical foundation of Forest School, which is derived from constructivism. The following section (4.5) briefly looks at the relationship between Forest School and several aspects of education including sustainability, children with disabilities, school transition, mental health and supporting parents; including, Social and Emotional Aspects of Learning (SEAL). The final part of the chapter (section 4.6) examines the position of Forest School in London, as all three of my participant groups are based in London.

4.2. Forest School: a brief history

Forest School is derived from a Scandinavian concept from the 1950s that deemed children's contact with nature from a very early age to be extremely important for their well-being and development. It focused on teaching children about the natural world in the natural environment. In 1993 a group of nursery nurses from Bridgewater College, Somerset, visited Denmark to observe the pre-school system. The nursery nurses came back to England highly impressed by the outdoor, child-centred, play-based pedagogy in Danish pre-schools. They then employed a similar concept with the children attending the college crèche and called it 'Forest School'. They claimed that children improved their skills through their own creativity in the outdoors.

In 1995, Bridgewater College developed a Bachelor's in Technology degree in Forest School and offered it to early year practitioners in particular. Soon, many involved in outdoor learning considered this a useful method and started to offer it across the UK. The Forest School Community held its first conference in 2002 and established a

definition and certain principles of Forest School. In 2011, with the establishment of the Forest School Association (FSA), the definition and principles were revisited. By 2015, the FSA had 1200 members who had completed the Forest School leadership training (Knight, 2016).

4.3. About Forest School

According to various scholars, Fjørtoft (2001), Harris (2017), Joyce (2012), Forest School follows a principle of child-initiated learning and learning through play. Forest School can be defined 'as an inspirational process that offers all learners regular opportunities to achieve and develop confidence and self-esteem through hands-on learning experiences in a woodland or natural environment with trees'[24]. Children attend Forest School over a period of time, "led by a qualified Forest School practitioner, trained in aspects of child development, skills such as fire lighting, basic wood carving and tool use, and local environmental knowledge" (Harris, 2018, p. 225). The spaces considered under Forest School are 'safe enough'. This implies that the learners can keep themselves safe by taking manageable risks. This, according to Knight, brings benefits in the form of improved self-confidence and self-esteem. Therefore, practitioners are also trained to focus on increasing "confidence and self-esteem of children through small, repeatable tasks and nurturing their personal, social and emotional development through development of social and team-working skills" (Harris, 2018, p. 225). Ideally, Forest School is conducted in a local woodland setting, though it could also occur in any green space in the school, but separate from the normal playground. This is more relevant in urban areas, such as London, where children either do not have a local woodland in their area, or being outdoors is not considered a priority by the parents or the school in order for the children to have an experience in a faraway park or natural environment. Therefore, special attention is paid to the fact that these children may feel apprehensive and lost in a heavily wooded area. Hence, they are initially taken out to smaller green spaces. Forest School has become an important method of outdoor learning in primary schools in England and

[24] http://www.forestschoolassociation.org/what-is-forest-school/

Wales, however, it is not part of the formal school curriculum or even compulsory (Kraftl, 2013).

There are six principles of Forest School[25]:

- Forest School is a long-term process of regular sessions, rather than one-off or infrequent visits; the cycle of planning, observation, adaptation and review links each session.
- Forest School takes place in a woodland or natural environment to support the development of a relationship between the learner and the natural world.
- Forest School uses a range of learner-centred processes to create a community for being, development and learning.
- Forest School aims to promote the holistic development of all those involved, fostering resilient, confident, independent and creative learners.
- Forest School offers learners the opportunity to take supported risks appropriate to the environment and to themselves.
- Forest School is run by qualified forest school practitioners who continuously maintain and develop their professional practice.

Learners go out in the learning area during all weather conditions and emphasis in this regard is placed on appropriate clothing. This pattern of engagement with the changing environment is considered essential to the learning experience. Learners get accustomed to the changes, appreciate and adapt accordingly, for example, getting wet and muddy in the rain, getting sweaty during summer and so on. This aspect of Forest School could also bring in the realisation that losing the green surrounding they enjoy is beyond losing a pretty picture, and that it is a loss of an essential experience and a fundamental part of them.

This leads us to understand the role that the Forest School practitioners play in the learning experience. Even though nature is said to be the primary therapist here, in terms of change in behaviour and belief, practitioners play a key role. It is said to be important that the practitioners build a rapport with their regular groups of learners. The dynamics of the entire group is formed with trust, respect and reliance, as learning

[25] http://www.forestschoolassociation.org/what-is-forest-school/

is initiated by and centred on the learners. Therefore, their interest in Forest School sessions is key as well. This, according to Knight (2012), is the main difference between other outdoor learning techniques and Forest School, and also contributes to the sphere of personal development of the learners. The sessions have a definitive beginning and end. The beginning of every session entails the reminder of ground rules and the end is about sharing experiences and perceptions. All Forest School practitioners undertake a Level 3 course (the vocational equivalent to academic A-level study in the UK) which is an amalgamation of theory and practice pertaining to outdoor learning based on the ethos of Forest School. Additionally, practitioners also learn basics of 'bushcraft' skills and gain a first aid qualification to enable them to work in remote learning environments. I will be looking into the course structure of Level 3 qualification as part of my data collection.

Furthermore, Forest School practitioners associate themselves with willing schools and organise outdoor sessions for the students of various years. The extent of involvement highly depends on the level of funding from the schools (Knight, 2016). Regarding the appeal to the school, Forest School emphasises on the benefits of being outdoors for children, for example, in terms of physical impacts, the impact on their mental health and therefore the impact on achievements in formal education. As the physical space is large and open, Forest School practitioners believe that this provides children with liberty to 'breathe' and express themselves. They can also choose to either take part in a group activity or find a quiet space to contemplate (Harris, 2018). Harris also believes that with fewer constraints in a large open area, children can run around, scream, shout, play and spend their pent-up energy. This then allows them to be calm when needed, especially while learning in a more formal environment. In terms of physical impact, increased and prolonged time spent in the outdoors has said to have positive impacts on bone and muscle development. Similarly, walking on different natural surfaces, climbing trees, dodging natural barriers, etc., provides young children with a sense of unevenness in the natural world and improves their sense of balance. According to Knight (2016), another extremely positive impact of taking children outdoors is fighting obesity. Health experts such as Berntsen et al. (2010); Jouret et al. (2007), have claimed that prolonged television watching increases obesity, exercise decreases it and establishing healthy habits in preschool children is key in achieving a healthy group of adults. Knight (2016), has

stated that neural pathways are established in the brain in response to repeated activity at a very young age. Knight also claims that in today's world, many parents themselves have never spent much time in the natural environment and hence they do not deem it important for their children either. Therefore, Forest School successfully fills the lacuna and provides children with opportunities to spend time in the natural world and learn through various engaging activities.

The Forest School Association believes that the sessions that take place in woodland or natural wooded environment support the development of a relationship between the learner and the natural world (FSA, 2011). Practitioners have associated being outdoors with enjoyment, "wonder" at natural things and making learning more exciting and memorable (Harris, 2018). Nanson (2014) speaks about the power of wildwood linking humankind to deep time and the force of nature. Waters (2011) describes the importance of linking trees and stories to deepen children's understandings of nature. Cartwright (2012) recounts how informal education, rooted in "place", draws out knowledge rather than pouring it in, thus creating confidence and self-worth. Similarly, various practitioners believe that since Forest School is less "target-driven" and more "process driven", this allows children to learn at their speed (Harris, 2018). Unlike school, with no pressure of assessment, children can enjoy and appreciate their learning. This takes me back to Chapter 2, wherein I discussed place-based education which connects schools with their environment and communities. Putting these ideas together suggests trees as partners in learning because one of the significant foci of Forest School is wilderness, rather than nature. Trees are considered the allies of wilderness. Therefore, Forest Schools help practitioners to work with trees to improve lives, supporting the developing minds and bodies of children and helping them to feel safely rooted in their environments.

According to a case study conducted by Claxton et al (2011) at Hartest Church of England Voluntary Controlled School (Suffolk), the school appreciates Forest School sessions for Years 1-4. The school claims that the sessions have helped the children to develop the "mental, emotional and social resources to enjoy challenge and cope well with uncertainty and complexity" (Claxton, Chambers, Powell, & Lucas, 2011, p. 2). Schools adopting a whole school approach by integrating Forest School plus other outdoor learning activities have claimed to be doing very well and give credit to the

integrated curriculum enabling children to see the purpose of learning and to apply subjects in context, making clear links between subjects and concepts. The outcomes also included the experiences supporting skills of independence, resourcefulness, resilience and communication. These are all ‘soft’ skills. Thus, it is these aspects that distinguish Forest School from, say, fieldwork and other forms of outside learning promoted by Field Studies Council and Geographical Association.

In other words, according to O'Brien and Murray (2005), the key differences between Forest Schools and other outdoor activities are:

- the use of a woodland setting
- a high ratio of adults to pupils
- learning linked to the National Curriculum and Foundation-Stage objectives
- the freedom to explore using multiple senses;
- regular contact for the children with Forest School over a significant period of time.

The next section further elaborates on the key pedagogical features of Forest School, which marks a distinctive line between Forest School and other forms of outdoor learning and, needless to say, formal education. The following sections are heavily derived from Sarah Knight’s work. Sarah Knight is a teacher, lecturer and a Forest School practitioner. She has written several books on the significance and various aspects of Forest School and is usually referred to by researchers studying Forest School.

4.4. Pedagogical concepts underpinning Forest School

In this section, I explore the pedagogical principles of the concept of Forest School. Based on a social constructivist paradigm, the pedagogy connects ‘simple’ but important and intriguing theories. I think they are ‘simple’ because they relate easily to any experience outdoors or anywhere else. For instance, mindfulness should be instilled in classroom learning and every other experience.

The first two concepts underpinning Forest School are constructivist and social constructivist theories (O'Brien, 2009), Leather (2012) and Harris (2015). Constructivism, as discussed in Chapter 2, is based on Piaget's learning theory. It states that children construct their knowledge through their experiences in the environment they are in. It expects students to be curious and ask questions constantly and therefore, they take ownership of the knowledge that they have created. Hence, making knowledge transferable to new situations. Similarly, social constructivism, based on Vygotsky's learning theory, states that construction of knowledge depends on those individuals and communities that students engage with on a regular basis while learning, for example, peers and teachers. Vygotsky claims that theoretical aspects of education come from school, and higher order thought processes and concepts are derived from the learner's everyday experiences extended and transformed by those theoretical concepts learnt in school. This form of pedagogy calls for an active and involved teacher, and pupils who are in a position to communicate with each other, share experiences, etc.

This also explains the improvement in communication and social skills. The Forest School ethos includes a belief system stating that we all learn from experiences; the more direct the experience, the more the learning (Knight, 2016). This then links to the theory of experiential learning by John Dewey (1935), who stated that learning through experiences is the most effective way of learning.

Figure 4.1 explains the pedagogical paradigm of Forest School. The core of Forest School pedagogy is composed of:

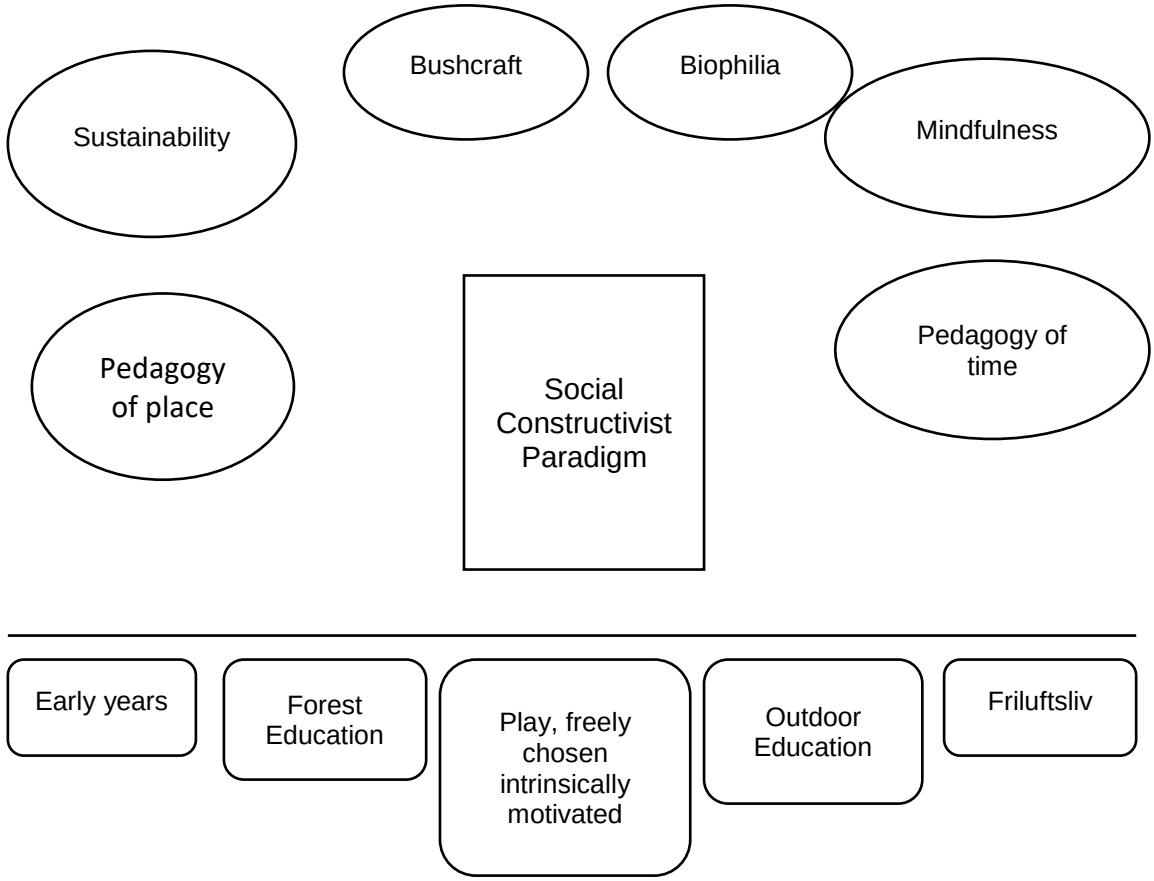
- Early years: starting the pedagogy with young children because it is easier to engage, mould and teach them;
- Forest education: education in and about the wilderness;
- Play, freely chosen intrinsically motivated, child-centred, play-based activities;
- Outdoor education: taking children out in the open and natural environment;
- Friluftsliv: a Norwegian and Swedish lifestyle philosophy based on 'experiences of the freedom in nature and the spiritual connectedness with the landscape' (Gelter, 2000, p. 79).

These five pedagogical elements are then channeled through the mode of social constructivist theory. This theory states that learning happens through engagement and communication with the social factors within an environment[26]. In this particular case, Forest School allows students to freely interact in the woodland and there are five methods employed to achieve positive results and facilitate learning in children:

- Pedagogy of time: activities in the natural environment for as long as the learners wish to carry on either repeating the activities or further developing them (Knight, 2016);
- Mindfulness: is a form of meditation that focuses on breath and therefore being present in the moment of now[27];
- Biophilia: the notion of innate nature of human beings to connect with all life form (Wilson, 1984);
- Bushcraft: wilderness surviving skills[28];
- Sustainability: condition under which humans and nature can co-exist in harmony to support present and future generations[29];
- Pedagogy of place: spending a prolonged period of time repeatedly in one given place or environment by learners so that the place or environment tends to teach the learners about its characteristics (Knight, 2016).

[26] http://www.ucdoer.ie/index.php/Education_Theory/Constructivism_and_Social_Constructivism
[27] http://franticworld.com/what-is-mindfulness/
[28] http://www.lowimpact.org/whats-the-difference-between-survival-bushcraft/
[29] https://www.epa.gov/sustainability/learn-about-sustainability#what

Figure 4.1. Forest School Pedagogy (Knight, 2016)



The other two aspects of Forest School are its holistic nature and the importance of place. As depicted in Figure 4.1, the same woodland is visited repeatedly over a period of time and learners are also allowed to re-visit the same activities. Hence, it turns into another key learning experience. Over weeks and months, as students observe changes to the same woodland as it is being used, the learners' perception sharpens. Learners start to facilitate the learning process themselves. Therefore, learning starts to happen in a constructivist mode, where learners are creating something that others will observe, critique and use. Through this construction, the learner is further motivated to learn and solve problems. This converts forest into education, through the method of social constructivism, and space and place act as the 'social' element others instead of peers and facilitators. According to Casey (2001), the relationship between place and self signifies the history and culture in place. One learner's place is stated to be different from another learner's, which has local elements that have

significance to a particular learner alone. Therefore, selection of an appropriate woodland for Forest School sessions is more than just a requirement.

Schools with Forest School programme for Year 5 and 11 have also claimed that benefits of the programme include personal resilience, confidence and skills. Students are provided time to explore their emotional reactions to the content of formal lessons and to consolidate their learning by self-initiated play-based explorations in their own time frames. Learners also involve themselves in planting more trees and supporting the late mowing of grassy areas to develop wild flowers and support insect life. Four distinct benefits identified by the leaders are:

'Using the learner-centred approach and the environment to consolidate their classroom-based learning;

Developing a sense of place that enhances their well-being;

Enriching their spiritual well-being by communing with the trees;

Increasing their awareness of sustainability issues. With Forest School having a social constructivist paradigm and a play-based approach both occurring in the same wooded space repeatedly, children are encouraged care for that space. This creates engagement with sustainability at a simple and local level' (Knight, 2016, pp. 108).

According to Eernstman and Wals (2013) sustainable development is most effective when it is embedded in the act of living, engaging people in a place through processes. However, there was no direct link found between Forest School and sustainability; Knight (2016) has only alluded to the possibility of Forest School promoting sustainability. This aspect will be further explored in section 4.6.

In order to look at the concept of Forest School holistically and to create a balanced discourse, the next section will look at the critiques of Forest School.

4.5. Towards a sceptical view of Forest School

Leather (2016) has raised some concerns regarding the manner in which Forest School, a Scandinavian approach, has been adopted in the UK. According to Leather, the concept of children spending time out in the natural environment is part of the

process of children growing up in Scandinavia. As explained previously, the concept of Forest School emerges from the Scandinavian philosophy of *friluftsliv*. When applied in education, *friluftsliv* supports experiential learning where the 'sensual intimacy' between land and people has strong links with indigenous traditions and the notion of authentic experience (Loynes, 2002, p. 120). According to Henderson (2001), even if *friluftsliv* implies outdoor learning or even recreation, it has its foundations in nature and is connected with the tradition of being and learning with nature. Henderson claims that this relationship holds an opportunity for a new level of consciousness and spiritual wholeness. Therefore, *friluftsliv* is different from just outdoor learning (Andkjær, 2012) in that it has been derived from a particular attitude or philosophy of nature, and the cultural roots of the philosophy might be lost if simply transferred to another country or context (Gurholt, 2014). According to Maynard and Waters (2007), spending time outdoors is not a central idea in British culture (notwithstanding the long tradition of 'fieldwork' stretching back to the nineteenth century), and therefore, many teachers in the British education system may not attach the same kind of value to spending time outside for extended periods of time. This could be because, as Leather (2016) explains, historically British imperialistic philosophy has portrayed nature and the outdoors as an entity to be conquered and romanticised. If so, this is clearly a different concept from *friluftsliv.*

Thus, Leather argues that the concept of Forest School is socially constructed and therefore, when transferred to a different culture or a country, it is modified into a socially 'more acceptable' version. He further argues that spending time out in the woods playing, exploring, walking or just being out, is a common activity for children in Scandinavia. On the other hand, sitting around the fire and sharing stories is now an essential part of Forest Schools in the UK, whereas it was an essential activity of British community 100 years ago (Leather, 2016). The question raised here is whether such a designed and regulated idea of spending time in nature can replicate a child's experience of being outdoors as part of her development. Can the familiarity with nature and the innate comfort in nature be offered through a programme?

For example, Cook (1999) suggests that the elements that constitute outdoor education in the UK are activities such as hiking, camping and sailing, which are culturally maintained as 'outdoor activities'. Similarly, the attributes associated with

outdoor education such as leadership skills, communication, team-work are also a result of a social construction (Cook, 1999), which has little to do with the deep philosophy of Forest School. Associations such as Scouts and Duke of Edinburgh Award have set activities for set reasons, to promote self-reliance and leadership qualities. Therefore, according to Leather, the social constructability of Forest School questions the convention of what constitutes an educational experience in the concept. Intriguing though the argument made by Leather might be, it is possibly important not to overstate, or oversimplify, the matter, for social construction plays a part in most of our experiences. Thus, children learn through experiences and these experiences are modified based on past and future experiences and social engagements, not least, conversations and discussions with peers and family. It is possible to set aside the specifically Scandinavian concept of Forest School whilst still acknowledging the origins and focus on adaptations made in the UK context.

With respect to the broader educational aspects of Forest School, the concept of learning through playing has also been challenged by Leather (2016). Firstly, Leather suggests that the parents might need more convincing about the value of having free playtime. This is because, just between adults (teachers) and children, the intention behind having playtime can be different (Leather, 2016). Similarly, in the wider context of outdoor learning, Bakar, Daud, Nordin, and Abdullah (2015) claim that 'play' culturally has different perspectives. For example, many Asian parents regard play as mutually exclusive from formal schoolwork and would like their children to pay more attention to their schoolwork than play (Lang, 1997). Secondly, teachers are neither trained nor do they have resources to implement play in the curriculum. The study conducted by Bennett, Wood, and Rogers (1997) with Reception teachers showed that although teachers were open to integrating play in the classroom, they struggled with supporting children's learning, engaging and interacting with them, and increasing their own level of knowledge on certain play contexts and measure progression.

The final argument by Leather (2016) is the commercialisation of Forest School in the UK. Although Knight (2009) discusses the need to have a national model for Forest School, which still remains a discussion, Leather believes that this will facilitate the commodification of Forest School by turning the educational philosophy into a product that can be sold and bought. Leather also opposes any specific organisation, such as

the Forest School Association itself, being the *governing body* of an education philosophy (as one of its principles states). The FSA might argue that it is different from an 'outdoors oriented' organisation such as Scouting or the Duke of Edinburgh Award, on the basis that Forest School conducts child-led activities at the same woodland throughout the year and does not aim at a regulated process of certification of any kind. With Forest School, the idea is the experience itself and the experiences are expected to give the children a certain insight and lead to behavioural changes and development. However, Leather mentions a very interesting issue of the commodification of education itself. Thus, Olssen and Peters (2005) claim that with globalisation and the marketisation of all aspects of human life, including education, schools and other educational organisations are in thrall to the actualities of market rules. A concern is, therefore, that standardising Forest School will also lead to it being 'sold' for a set of said experiences and learning. This then questions the significance and the purpose of Forest School. What are the goals of various Forest School sessions and how are they assessed or compiled in the form of a set of tangible results? Are such assessments even important to maintain the novelty of Forest School? I am looking forward to deliberating the answers to these questions through my data collection, especially while discussing how to link Forest School and formal education.

Further ahead, I will move on with various aspects of learning and development that are currently connected with Forest School through the lens of Sarah Knight.

4.6. Other aspects of Forest School

4.6.1. Forest School and Sustainability

According to Knight (2016), Forest School pedagogy engages all seven Rs proposed by Samuelsson and Kaga (2010) to promote sustainable lifestyle amongst children and hence builds a commitment to sustainability issues. However, there is no clear explanation to the method Forest School follows to include the 7Rs.

The 7Rs for sustainability, according to Samuelsson and Kaga, are "reduce, reuse, recycle, respect, reflect, repair, and responsibility:

• Reduce is about reducing the consumption of food, materials, and resources, which may involve working with parents on the problem of children's exposure to advertisements promoting endless consumption.
• Reuse is about showing children that materials can be used many times for different purposes in school and at home.
• Recycle can be encouraged by asking children to bring recyclable materials to school and integrating them into a range of activities.
• Respect is about nurturing understanding of and respect for nature and natural processes and reducing the extent to which they are violated.
• Reflect is a habit and skill everybody will benefit from in working for sustainability.
• Repair involves taking care of broken toys and other objects and repairing them.
• Responsibility is about trusting children to take care of something or do something they can feel proud about" (Samuelsson & Kaga, 2010, p. 59).

Forest School also recognises that without this firm foundation of sustainability issues, it may not be possible to direct the new generation towards saving natural resources (Knight, 2016). Knight, in her book (2016), has sporadically commented on the sustainability aspect of Forest School with examples of schools wherein regular Forest School has either led to questioning of environmental changes or could lead to a general environmental awareness in children. However, there is neither a specific chapter nor section dedicated to this idea in the book nor articles by other authors that specifically and coherently tie Forest School to sustainability and other environmental issues we face today. Therefore, I am unable to discuss from the literature any further on matters concerning the most important aspect of research, i.e. environmental education, with to respect Forest School.

4.6.2. Forest School and Social & Emotional Aspects of Learning (SEALS)

Knight (2011) has claimed that Forest School aids in improvement of emotional literacy and this could provide national and local authorities and schools with a solid cause to include this programme in their curriculum. Emotional literacy includes self-awareness, self-regulation, motivation, empathy and social skills (Faupel, 2003). The first three elements are referred to as personal competencies and the last three are social competencies.

Self-awareness

Enabling the understanding of the emotions one feels, as well as one's strengths and weaknesses is self-awareness (Knight, 2011). According to Knight, research has proved that expressing thoughts in terms of words is a sophisticated process and emotional self-awareness is basically being able to recognise, understand and express what one is feeling. This ability can be very useful when an individual is going through negative emotions. For example, if one recognises that she is feeling anger, then she can decide how to express her anger. Knight (2011) claims that in schools today, emotions are not distinguished, other than as 'good' and 'bad', whereas the English language has 6000 emotional descriptors. As self-awareness helps one to acknowledge one's strengths and weaknesses, Forest School aids in that process. Forest Schools introduce learners to bushcraft, whittling and fire lighting. Activities also involve climbing trees, jumping off fallen trees and tight rope walking. Children who are scared of certain activities or struggle with certain skills do not mask their fear. Therefore, even if a child fails initially, she will potentially keep trying until she succeeds. Hence, learners are provided with ample opportunities to learn (Knight, 2011).

Self-regulation

Being able to manage one's feelings rather than just knowing what is being felt is a valuable skill (Knight, 2011). Strong emotions can cloud our judgements and thus, learning how to control and regulate what is being felt is significant in forming and maintaining relationships, both personal and professional. Children and young adults struggle to regulate their emotions (Knight, 2011). Forest School provides a calming environment to regulate one's thought process. For example, those children who usually struggle to sit still in the classroom environment, find it easier to sit calmly around a fire in the woods and listen to a story. Various activities under Forest School require children to concentrate, think and engage with the activities and their peers. This is the beginning of self-regulation. For instance, using sharp objects like pocket-knives requires learners to concentrate and comply by rules in order to be safe.

Motivation

Navigating through emotions and working towards a long-term goal requires us to be motivated to do so. This also requires us to cross several hurdles, solve a lot of

problems and regulate our emotions regularly. Faupel (2003) says that motivation is ‘about our choice of goals and our determination to reach these goals.’ Learners who lack motivation fear failure and hence fail to have a long-term goal. According to Knight (2011), Forest School provides a new environment to try, fail and then to try again.

Empathy

Knight claims that empathy is a ‘sophisticated emotional-cognitive act with various levels or degrees’ (Knight, 2011, p. 143). It allows us to understand someone else’s point of view from their perspective. As we grow older, this ability improves with maturity, personal experiences and our level of understanding. For our brain to anticipate someone else’s emotions or reactions to various situations, it needs social experiences. According to Knight (2011), impoverished home experiences do not allow children to understand others’ points of view or suffering, and schools provide restricted experiences. Therefore, learners do not have opportunities to fully contemplate others’ presence around them.

Social skills

In order to listen, understand and reciprocate appropriately, one must build on empathy. Social skills help in avoiding conflict that arises due to differences in points of view and mediating difficult situations with others. ‘Social skills is a loose description for a set of behaviours that mediates potential conflict, allows one to be assertive and to be able to influence the thinking and actions of others without aggression’ (Knight, 2011, p.144). Additionally, it helps in making new friends and maintaining relationships. Knight (2011) claims that some learners who come to Forest School sessions come from home environments where socially acceptable ways of relating to others are unknown. Hence, group problem-solving and handling tools while being mindful of potential dangers help such learners to relate to others and communicate positively. Experiences at Forest School could arm learners with social and emotional skills that support their learning at school level (Knight, 2011).

4.6.3. Forest School for children with disabilities

Forest School is also acknowledged for “an enabling learning environment for children with learning difficulties including children who have learning needs of considerable severity’ (Pavey, 2006). Individual experiences are facilitated by the holistic and learner-centred approach which in turn supports their decision-making process. This methodology meets the requirements of the Convention on the Rights of Persons with Disability (UN CRPD). Knight (2016) claims that “it is possible to allow children with disabilities to enter the woods just by working with and alongside them, principally by asking them how best to provide what they need” (p. 120). It is well acknowledged that failure is significant for personal growth, for both the leaders and the learners. Therefore, the leaders refrain from leaping in to decide what is good or bad for learners with disabilities as they are instinctively and professionally inclined to protect those who are perceived as vulnerable. The social constructivist learning model helps learners with disabilities to build their own knowledge with the help of their leaders and peers. Additionally, pedagogy of time allows them to progress at their own pace. “Being mindful of what occurs and what is observed enables leaders and participants to share and value what is achieved. These achievements are also about changing the perceptions of conventionally abled to appreciate the developing abilities of the differently-abled” (Knight, 2016, pp.120). Having mixed groups of students has appeared to have worked well to instigate compassion and empathy in students perceived as abled towards those who are not.

4.6.4. Forest School and transition

According to Knight (2016), Forest School is also known to assist students moving from primary to secondary school by working on their self-esteem, resilience, formation of new social contacts and so on. Students from different years and academic capabilities work as part of the same group on the same or similar tasks and engage with each other. The learners are given more freedom in deciding how far they can venture into the woodland without a leader and more liberty to work around activities and their curiosity. The practitioners are entrusted with the responsibility of “scaffolding the formation of new social contacts, skills that will be transferable, and building self-confidence and self-esteem that create resilience” (Knight, 2016, p. 133). Sessions gradually develop from exploring the woodland and knowing each other to

tree climbing, fire lighting and whittling. Additionally, there are meditation sessions included to promote mindfulness. With time, these communities grow stronger and more communicative and importantly, this helps members to deal with the constantly changing world.

4.6.5. Forest School and Mental health

Knight (2016) accepts that there is more research on the effect of nature on adult mental health than on that of children. However, in the recent past, Forest School practitioners have considered the positive effect that natural environment and trees can have on mental well-being of children.

Knight also acknowledges that all outdoor activities can have a positive impact on mental health and hence, what makes Forest School special is a question to be discussed. To answer this question, theories put forth by Jung (1967) recognise the woods as a place of deep meaning and spirituality. Knight then steers our attention towards the fact that Forest School sessions occur in naturally wooded areas and employ the methods of pedagogy of place and biophilia, which encourage learners to spend prolonged periods of time amongst trees creating a sense of place. This, according to Knight, offers the learners a therapeutic experience. Deakin (2008) states that “to enter wood is to pass into a different world in which we ourselves are transformed”. Deakin appears to confer woodland with the title of a therapist or an alternate universe where we find ourselves reformed.

4.6.6. Forest School and supporting parents

Forest School practitioners noted during activities with parents that parents lacked confidence and knowledge about taking charge of children outdoors, both during the Forest School sessions and privately. They feared risks and not knowing how to engage with children out in the natural setting. This, according to Knight (2016), largely depends on their own experience outdoors as children.

Forest School practitioners encourage parents to take their children outside for sessions. They also encourage parents to join their children in spending time outdoors and therefore, when parents experience the benefits of having spent time in the natural environment themselves they then are inspired to take their children out. Parents are

also elected to sign up for Forest School sessions to appreciate the value of natural environment. Partridge and Taylor (2011) worked with parents in the Forest School settings and observed positive results. Parents were found to be more confident and communicative with their children. This group also consisted of children and parents with special needs. 93% of parents agreed that after the session their children listen better to them and their peers (Partridge and Taylor, 2011).

4.7. Forest School in London

Thomas and Thompson (2004) claim that children's experiences and engagement with nature is decreasing in urban areas. London as an urban region has limited green space although it is famous for its parks and gardens. Only 4.6% of the city is covered in woodland (Greater London Authority, 2008, p. 8). Needless to say, setting up Forest School in London is a challenge. London has several distinct features that makes it different from other cities in England. London sees extreme wealth alongside extreme poverty. Child poverty is especially high in the inner area. Crowded housing and obesity rate are highest in London. Furthermore, proportion of black, minority and ethnic students is also highest in London. London also witnesses highest student mobility rate in England. This refers to students moving frequently without any choice. There is low attainment at Key Stage 1 (Year 1 and 2 between the age of five and seven) and greatest risks of social exclusion. Even though Forest School should take place in a woodland, many other researches about outdoor learning (Pryor, Carpenter, & Townsend, 2005); (Mirrahimi, N.M.Tawil, Abdullah, Surat, & Usman, 2011) suggest that learning in any natural and open space should bring in the same benefits. In any case, a city like London that has limited open and green space cannot afford to restrict its outdoor learning to forests or woodlands. However, London has more parks and gardens than any other capital city in the world. These open spaces form a major play space for children and adults alike. Even then, many parents do not encourage their children to explore beyond their immediate surroundings (S. Palmer, 2007). Childhood and nature survey by Natural England in 2009 claim that less than 10% of children play in natural open spaces and close to 50% are not allowed to play outside unsupervised, as parents are concerned about the safety of their children (NE, 2009).

Additionally, adults' own experiences influence their choices and opportunities that they provide to their children (Munoz, 2009). When setting up a Forest School, practitioners are expected to understand the apprehensions expressed by children, parents and colleagues. The amount of time that the stakeholders take to get used to the concept of Forest School depends on their previous experiences and mostly on the age of the children. Hence, practitioners must be cautious about pushing children beyond their comfort zone. However, studies suggest that those children who exhibit more reluctance in engaging with the natural environment are the ones who need that most (Milchem, 2011).

Natural England and the Forest Education Initiative authorised Eastwood Nursery School Centre for Children and Families to conduct a series of Forest School taster sessions to introduce the concept in London in March 2010. This project specifically aimed at encouraging outdoor play, learning and teaching. Furthermore, its purpose was to "investigate the benefits, challenges and practicality of setting up Forest School in urban areas" (Milchem, 2011, p. 17). In London, outdoor play areas are limited, with synthetic flooring and green surfaces. Additionally, the equipment available to play with are man-made and available in prescribed 'safe' areas. This arrangement may not inspire children to play outside. This then calls for a better and natural outdoor learning experience.

Site selection in urban areas like London carries its own set of difficulties. From limited available outdoor space, permission to use the space to the potential dangers and risks in the area, practitioners have to jump a lot of hurdles to establish a successful Forest School. Potential risks include dog fouls, traffic, rubbish, syringes and needles, broken glass and condoms. However, many practitioners say that these risks introduce children to potential hazards and teach them to keep themselves safe. 'Careful site selection, risk assessments, appropriate boundaries and high ratios ensure that both the adults and children feel more confident' (Milchem, 2011, p. 22) and also enable them to reap more benefits from learning and spending time in a natural open space. This takes me to the fascinating initiative by Geographer Dan Raven Ellison called the London National Park City, which is set to launch in 2019. This project aims to transform London into a greener, healthier and a wilder national park city so as to provide a large green space for the city dwellers and conserve its

natural and cultural heritage[30]. This project also specifically addresses the mental and physical health benefits that children will get from constant engagement with nature. I am extremely intrigued by this project and hoping for its grand success for the benefit of both the environment and city dwellers, especially children.

According to Milchem (2011), Forest Schools in London lack consistency and therefore require collaboration, multi-agency and inter-disciplinary work (p. 25). Many schools, educational institutions and parents have not heard of Forest School and many practitioners too have met with resistance from schools and parents when Forest School is introduced. Though schools are slowly warming up to the idea of outdoor learning, they are not necessarily open to or promoting Forest School. Milchem claims that practitioners need to network together in order to share ideas and skills and support each other.

4.8. Summary of the chapter

Forest School as a concept originates from a Scandinavian method of play-based teaching which takes place in the naturally wooded environment. Acknowledging the positive impact that it had on young children, nurses from Bridgewater College introduced a similar programme in England in 1993. Since then it has undergone various forms of scrutiny and then eventually emerged as Forest School.

The theoretical foundation of Forest School lies within constructivism, which proposes that children learn while engaging with their environment. Therefore, it is based on young children spending time in the natural environment and learning from their experiences. Contributions made by Forest School in various fields of human development and growth have been acknowledged by various scholars, although I have found only limited discussion around sustainability. However, there are plenty of case studies claiming that Forest School has had a positive effect on learners' self-confidence, team building and leadership qualities, as well as other social and

[30] http://www.nationalparkcity.london/

emotional aspects of learning, such as empathy and motivation. However, various scholars, such as Leather, have raised concerns about the concept of Forest School as a learning tool in the UK. Leather has argued that the authenticity of a programmed experience in natural surroundings through Forest School is questionable and has further questioned the commercialisation of the concept through various agencies providing Level 3 qualification certificate to practitioners based on different approaches.

London being an urban area faces a different set of challenges with regard to Forest School. Limited access to green space and socio-economic disadvantages amongst the population make outdoor learning difficult and deemed by many as non-essential. However, the principles of Forest School encourage sessions in any available open, green space.

Through my theoretical research on Forest School, it is now clear to me that Forest School is an attractive and popular extracurricular programme across the UK. It brings along physical and mental well-being, improves social, cognitive and personal skills and introduces children to nature. Its specific format of exposure to the same space at regular intervals with child-initiated and led activities is in some ways unique when compared to other outdoor activities. However, in the interest of my study, I have still to see a coherent connection between Forest School and environmental education and sustainability. The connection between the two has been briefly mentioned in segment 4.6 because I have yet to see a well-supported case which states that Forest School is directly proportional to sustainability. It will be interesting to look at this aspect through my data collection.

Chapter Five: Methodology of the study

5.1. Introduction

This chapter discusses the methodology of my research in two sections; Section I: Research approaches and Section II: Description of methods.
Section I explains the research design in relation to the research questions and preferred choice of research method, which is case study. Case study is, in essence, a widely used approach to undertaking educational research based on observation and measurement of a real event in its real context. In contemplating case study research, I have drawn upon Robert K. Yin's writings and the work of Hamilton and Corbett-Whittier (2013). This chapter introduces the principles I have adopted in designing this research study. Following the discussion about the research design, the chapter goes on to explain the case study research method. Section II describes my process of data generation and the timeline. The various sources of data, data generation, and the data analysis for my study is described in detail.

The broader aim of this research is to examine a particular form of outdoor learning (Forest School) and its relationship (if any) with the formal school curriculum in the context of environmental education. My intention then is to build an understanding of Forest School based on direct observation and from the testimony of participants – the children, the teachers and others. It is therefore clear that 'constructivism' is a foundation principle of the study (see Chapter 2).

5.2. Section I: Research approach

5.2.1. Research design

Research design is undertaken to ensure that the data and the findings address the research questions. Research design can be defined as a plan that "guides the investigator in the process of collecting, analysing and interpreting observations. It is

a logical model of proof that allows the researcher to draw inferences concerning causal relations among the variables under investigation".(Nachmias & Nachmias, 1992, pp. 77-78)

My research design is based on the theoretical concept of constructivism (see pp. 29-33) to address my research questions. Case study research method is the means here to capture the data that would facilitate this process. The data generation tools used here include: observation, interview, photography. The design is summarised in Table 5.1, and the rest of this section justifies the design in a little more detail.

Table: 5.1

Research design

Theoretical Perspective	Genre	Methods
Constructivism	Case Study	Observation Interview Photography

5.2.2. Components of research design

Yin (2003) has proposed five essential components for a research design. According to Yin, a study or research question is essential to set the study. Case study questions essentially explore the 'why' and 'how' of an event. Next, study propositions direct the researcher towards a path to answer the research questions. It could be a sub-question or a 'hypothesis' and the researcher works towards answering the sub-question or responding to the hypothesis. Thirdly, the unit of analysis is the case itself and the parts of the case, such as: participants, occurrences; are also studied and measured. Additionally, the data generated needs to be connected to the propositions. The pattern-matching technique enables a researcher to connect several evidences to some or the other part of the proposition. In the end, the criterion for interpreting the findings is the assumption that the patterns of data complement each other to provide the researcher with answers to her research questions.

Components of research design give the researcher a fair knowledge on how she should structure her research. This is also important in order to maintain transparency and thereby have credible results.

The foundation to the research and the research questions have been introduced in Chapter 1. In the interest of this chapter, I have reiterated my research questions.

Main Research Question

What relationship does Forest School as an outdoor learning tool have with formal education with regard to environmental education?

Sub questions

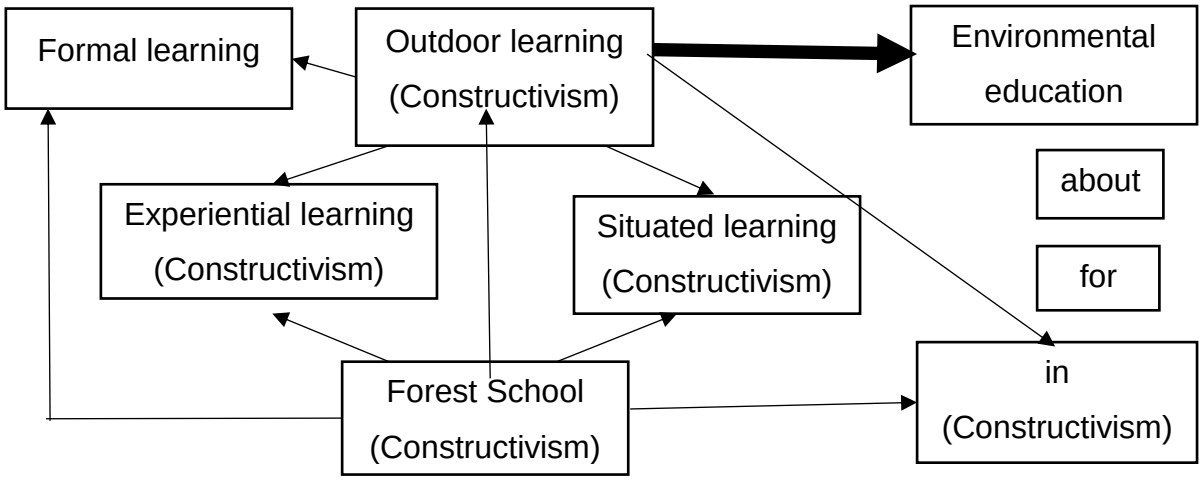
- What associations between outdoor learning and formal education are recognised by school teachers and Forest School practitioners?
- Does Forest School facilitate environment sensitivity according to children and parents?
- How can Forest School be included in formal education according to teachers and Forest School practitioners?

5.2.3. Developing theory

A complete research design is the theory of the research (Yin, 2003). Whether testing a theory or developing it, considering theoretical perspectives prior to conducting a case study research is essential. According to Yin (2003), a theory is the essence of the research being conducted and the research design embodies the theory. This theory could be hypothetical in nature (or rather is hypothetical in nature) and provides the blueprint to the research in order to decide forms of data and its generation The theory will also help in deciding the strategy to be used to analyse the data. Reviewing the study or topic related literature and discussing the findings should follow challenging questions, such as, the exact topic of study, purpose of the study, the objectives to achieve and so on. This exercise then leads to formation of a theory to shape the research further. An appropriately developed theory leads to generalisation of the case study, although one always must be aware of the possible limitations of case study research in this regard: generalisations are not claimed to be universally applicable. The generalisation used for case study research is called analytical generalisation. Yin (2003) suggests that a previously developed theory is used as a base to compare the empirical data with. If the empirical data supports the theory, then replication may be claimed. On the other hand, if the empirical data supports the theory and at the same time does not support the rival theory the data is more potent.

The theoretical platform of my case study consists of the educational theories of experiential and situated learning, in addition to my construction of their relationship with environmental education, outdoor learning and Forest School (Figure 5.1). The task throughout this study is to explore the relationship between outdoor learning and formal education through the case study of Forest School. Constructivism is the underlying theory for outdoor learning, experiential learning, situated learning and Forest School in my research. With environmental education being one of my prime focuses, I am employing constructivism to explain the possible exchange of knowledge about the environment between the participants and formal education through outdoor learning and potential development of sensitivity towards nature.

Figure 5.1. Theoretical Framework (see Chapter 2)



My overarching aim (which ultimately, I wish to pursue and further get involved in innovative research projects into implementation of outdoor learning into formal education to develop environmental and climate change education) remains the impact of outdoor learning on environmental education. In order to obtain the desirable results, I will be conducting a case study research and the following section discusses the method further.

5.2.4. Case study research

Having outlined in the previous section the main principles of constructivism, I now go on to discuss case study as an appropriate method for my research. This section outlines in more detail case study as an appropriate 'genre' through which to conduct my study (see Figure 5.1).

Case study research is an empirical study of an 'event' which is happening in present time in its real world context (Yin, 2014). A good case study 'contributes to our knowledge of real-life events or phenomena through enhancing our understanding of contexts, communities and/or individuals' (Hamilton and Corbett –Whittier, 2013, p.39) and it does this by asking 'how' and 'why' questions which aim at exploring the reasons for an event or case. The event or phenomenon or the case is a bounded system. It is bounded by time, space, and context. The study boundaries are established at least in part through research questions.

Case study is a flexible strategy to undertake research. According to Yin (2003) since the world is socially constructed and fluid and dynamic in nature, case study approach must remain flexible. Readers can assess the quality of work as the study makes a note of all changes and explains the reasons behind the choices made. Case studies are particularistic, focusing on a particular event or case. Similarly, they are also descriptive. The event researched is described in detail in the end, case studies are heuristic, with an in depth understanding of the event. This adds to the meaning of the phenomenon and extends the experience while confirming the known. Case studies are also inductive in nature wherein theory is derived, or at least developed, after the analysis of data.

My study focuses on Forest School. Forest School is a concept (not a specific place) applied in schools, for example where children are taken to the woodland once in a fortnight over an extended period – maybe a whole year. Since I have observed three groups in two different settings, my research is a multi-site single case study (see following section). The research focuses on the purposes and processes of Forest School. The study is bounded by the woodland Forest School sessions take place in, the time period of every session, the specific activities that occur during these sessions

and the experience that the students have. The study then explores how the outdoor experiences through Forest School may facilitate formal learning in the school curriculum and vice a versa. I have also paid close attention to the relationship learners develop with the woodland and hence their perception of nature.

There are four main types of case studies based on the objectives of the researcher and hence the characteristics of the study (Yin, 1989). Exploratory study is the primary pilot study carried out before the large-scale investigation. Then, descriptive study focuses on one or two attributes of the case and makes the unfamiliar familiar. Explanatory study focuses on the case superficially and then in depth to understand the phenomenon in it. Finally, evaluative study assists in evaluating specific projects and programmes to analyse the process itself or the outcomes.

Merriam (1988/1991) explained case study based on the purpose of the study. Particularistic case study explains a specific event or phenomenon, usually a practical problem/puzzling occurrence/situation. Descriptive case study provides a rich and exhaustive description of the phenomena studies. It could be defined as 'the complete, literal, description of the entity being investigated' (p. 29—30). At last, heuristic case study intends to increase the understanding of the event. "They can bring about the discovery of new meaning, extend the reader's experience, or confirm what is known" (Merriam, 1998, p .30). Similarly, Stake (2005) has categorised case study research method into three types based on the purpose of the study. Intrinsic case study is a single case study wherein the interest is in the case itself and no other generalisation can be derived. Instrumental case study is also a single case study undertaken for generalisation and the case itself is not significant. Collective case study is a multiple case study to derive generalisation. Research is conducted to understand the same phenomenon over various cases or events.

In summary, my case study is exploratory and intrinsic in nature. It explores the relationship between outdoor learning, through Forest School, and formal learning. It also explores the effect that outdoor learning has on learners in terms of the environment they are in. The case study itself is of prime importance as the primary focus of my research is the *concept* of Forest School and its relationship with the

formal learning and environmental education. In this sense, I have adopted a single case study design, though it has several sites.

According to Yin (2003), a single case study can be thought of as a single experiment. Yin has proposed five possible reasons for choosing a single case study. The first possible reason is when the single case study represents a well-founded critical theory then it can be applied to confirm the same theory under the given circumstances. The theory here has very specific parameters and conditions and therefore the single event chosen here should fall under those specific parameters and conditions. Secondly, when the case study represents an extreme or a unique case, as one that can be found in psychology, the case is so rare that it is worth being researched and documented. In contrary to the second rationale, the third rationale for choosing case study is when the case study is typical or a representational event. Here the task is to note the everyday circumstances of the event. Furthermore, a revelatory case is when a researcher has found a unique opportunity to study an event which was never provided to any other researcher before. And the final rationale to choose a case study is to do a longitudinal study. The same case is studied during different points in time.

My study with the Forest School follows the third rationale wherein the regular occurrences of the Forest School with certain groups of learners will be studied to explore and understand how outdoor learning is related to formal learning in schools and how it influences environment education.

5.2.5. Sources of data

Table 5.2

Six sources of evidence - Strengths and Weaknesses (Yin, 2003)

Source of data	Strengths	Weaknesses
Documentation	stable - can be reviewed repeatedly unobtrusive - not created as a result of the case study exact - contains exact names, references and details of an event	retrievability - can be low biased selectivity, if collection is incomplete reporting bias reflects (unknown) bias of author access - may be deliberately blocked

	broad coverage - long span of time, many events and many settings	
Archival records	Similar to that for Documentation precise and quantitative	similar to that for Documentation accessibility due to privacy reasons
Interviews	targeted - focuses directly on case study topic insightful - provides perceived causal inferences	bias due to poorly constructed questions response bias inaccuracies due to poor recall reflexivity - interviewee gives what interviewer wants to hear
Direct observation	reality - covers events in real time contextual - covers context of event	time consuming selectivity - unless broad coverage reflexivity - event may proceed differently because it is being observed cost - hours needed by human observers
Participant observation	similar to that of Direct observation insightful into interpersonal behaviour and motives	similar to that of Direct observation bias due to investigator's manipulation of events
Physical artefacts	insightful into cultural features insightful into technical operations	selectivity availability

The sources of data considered in a case study research are potentially eclectic and are identified in Table 5.2, including the strengths and weaknesses of each. Documentation, Archival records, Interviews, Direct observation, Participant observation and Physical artefacts contribute appropriately to a case study research. There could be many other sources based on the nature of the study conducted, such as videos and photographs. To confirm the validity and dependability of the research,

in order to ‘triangulate’ (see discussion on pp. 11-12), it is imperative that the researcher chooses many sources of data in line with the research questions.

All six above mentioned sources of data can be accessed through electronic media, such as social media, communication modes and internet resources. Conducting an online survey or interview on Skype is very common and permitted. However, caution must be exercised in terms of limiting the search on the internet as information is available in abundance and can be overwhelming or digress the researcher from the topic of study. Double checking information is advised as it could provide more clarity on the interpretation of the information or supplement any form of incompleteness. In case of using social media accounts such as Facebook, care must be taken to check the authorship and originality of the information (Yin, 2014). Finally, it is imperative that the researcher maintains the chain of evidence. This involves maintaining a clear and accurate record of data generated. If an external observer were to take a look at the data, they should be able to trace the line of enquiry from the research questions to the findings and vice versa. This assists in reliability of the database in the study.

In my research, I have identified and employed the following data generation tools. These were implemented mainly during the summer term of 2017.

Participatory observation is a non-judgemental, narrative description of what is being observed at the field with the participants. The observation can also be linked to other forms of data such as photographs and interviews (Hamilton & Corbett-Whittier, 2013). The focus of participatory observation in my study were three groups of 14-15 students of age 5-8 years old at Forest School sessions. While I engaged with the participants, I captured the particular interest that the participants have towards FS during their time at the woodlands through relevant questions. I was extremely keen on observing their perception of natural objects, such as plants, pebbles, logs.

Interviews provide an account of personal experiences of the participants. With the view of capturing different viewpoints and experiences of Forest School, I have interviewed the students, their parents, class teachers and Forest School practitioners. This method followed after participatory observation, which then provided me with a clearer picture of Forest School at these specific sites. My interviews were face-to-face, over Skype and on telephone. They were recorded using an audio recording

device. The questions were open ended as I wanted all the participants to narrate their Forest School story.

Photographs taken during the Forest School sessions provided me with visual evidence of the form of activities that the students engaged in at the Forest School and their response to them.

Field notes taken during my observations of the Forest School sessions are an extremely important source of data. As discussed previously, they contain the behavioural and communication patterns of the participants, my conversations about their activities with them, their feelings and most of all, the general mood and outlook towards the activities.

Given the complexities, field notes can play a very important role in helping focus and connect data description, manipulation and interpretation. Field notes emerge from the process of noting down observations, anecdotes, practices and communication patterns between participants during participant observation. Spradley (1979) has identified nine dimensions for participant observation (Table 5.3), which illustrate the complexity that regular field notes can help to make sense of as a continuous process during the life of the study.

Table 5.3

Dimensions of participant observation (Spradley, 1979)

Dimension	Description
Space	Physical layout of the place(s)
Actor	Range of people involved
Activity	A set of related activities that occur
Object	The physical things that are present
Act	A set of related activities that occur
Event	Activities that people carry out
Time	The sequencing of events that occur
Goal	Things that people are trying to accomplish
Feeling	Emotions felt and expressed

Field notes can also contain notes collected by employing any other methods in line with the research methodology and theory, and according to Wadsworth (1998), there are certain steps to be taken by the researcher to ensure efficient documentation of field activities. Firstly, observations not only do observations have to be recorded diligently during the observations, but the researcher's experiences and perceptions after the event must also be noted. However, personal reflections should be kept aside from primary observations. It is also important to work on the kinds of questions that need to be asked in order to confirm any emergent personal interpretations. This can also be achieved by arranging a 'feedback' session with the participants. Finally, the researcher must work on the themes as they emerge, and the field note book can be enormously helpful in recording such iterative and often informal processes.

Hammersley and Atkinson (2007) state that as a researcher enters a community to study a phenomenon, the concern is that she becomes a part of the social world she is studying. Reflexivity acknowledges that the researcher's place in the community is influenced by 'the socio-historical locations, the values and interests' the place bestows upon her. This opposes the idea that social research can be conducted independent of the influence that the researcher's presence within the community brings about. In other words, according to Hammersley and Atkinson, 'The production of knowledge by the researcher has consequences' (Hammersley and Atkinson, 2007, p. 15). Therefore, the researcher must reflect upon her own history, values and perspective in order to understand how it might affect the manner in which she analyses the data collected and how the report is thereby written (Reeves et al., 2013). Reeves et al. (2013) also emphasise that in terms of the research thesis, reflexivity pertains to the description of the researcher's 'ideas and experiences, which can be used by readers to judge the possible impact of these influences on a study' (Reeves et al., 2013, p. 1370).

5.2.6. Data Analysis

According to Hamilton and Corbett-Whittier (2013), the validity of a study depends on the accuracy of the findings. In case study research, this is achieved through triangulation of data collected from different sources, which will be discussed in detail in this section. It can also be achieved through member checking. This concept is utilised to check the data collected with the participants. For instance, this could

involve summarising the information derived from an interview and checking with the interviewee whether what has been understood by the researcher is right. Similarly, the degree of dependability of the research is ascribed to the clarity and justification of the procedures used (Hamilton and Corbett-Whittier, 2013). There are, according to Hamilton and Corbett-Whittier, three key approaches to data analysis. The first approach involves comparing the data with the research questions. This includes relating appropriate parts of the data with different aspects of the questions. This can provide a multi-dimensional outlook to the data generated. Secondly, grounded theory, founded by Glaser and Strauss (1967), can establish the possibility of the researcher discovering a new theory through data analysis. This does not mean that the researcher would not have a theory in place before the commencement of data collection. However, it keeps the process open to findings and challenges. Critical comparative analysis of data helps to check the robustness of the research and development of research theory. Lastly, content analysis is the most frequently employed method of data analysis. This involves reading through the data and coding the key concepts and the frequency with which they have been repeated. Contemporary content analysis also looks at the relationship between the key concepts. This then pays attention to the language used by the participants and hence is respectful towards the cultural and social values.

The process of data analysis is very well summarised by Miles and Huberman (1994) who stress that the first stage of analysis after data generation is collation of the data. But as with all forms of research, the data needs to be 'reduced in quantity and complexity' in some way. In qualitative research, data reduction is usually accomplished through coding. Listening to the interviews and reading and re-reading transcripts and field notes to pick out repeated terms and words and themes is essential. This then leads to categories with examples. As the researcher moves through the data, more new categories may emerge. Many categories may overlap and it is important to go back to data and note down the manner in which categories overlap. Display follows coding when codes, themes and categories are displayed by the researcher to understand what the evidence is conveying. The researcher might also want to go back to the research questions in order to re-focus and ensure they are being answered in some way or the other. Following the display, a conclusion is

drawn, although it is important to verify the credibility of the findings again. Verification is conducted by going back to the data and critically analysing it further to ensure that the analysis has been on track. This process may also include member checking and/or working with another independent researcher.

Considering that there are various sources of data, the researcher must ensure that the findings have credibility and have been contrasted and compared with each other. Data generated from different sources enables the process of triangulation. According to Yeasmin and Rahman (2012), triangulation is a process of data verification by employing several data sources and methods. All the data sources, methods and theories are combined to investigate or study one single phenomenon. Smith (1975) suggests that the term 'triangulation' is inspired by the military and navigation strategy that employs varied multiple orientation points to obtain the exact position of an object. This is based on basic principles of geometry which propose that the more the number of points pointing to a position, the greater the precision. Similarly, in social science research, the more the perspectives employed to look at a concept, the better the possibility of measuring and understanding of the concept. Thus, according to Reeves et al (2013), triangulation is a significant way to ensure the 'quality' and 'reliability' of the research findings: that is, their 'trustworthiness'. In addition, multiple sources of data help the researcher to establish an in-depth and characteristic evidence-based description which is appropriate to the topic of study.

Denzin (1970) has suggested four types of triangulation consisting of data, method, investigator and theory triangulation (Table 5.4).

Table 5.4

Types of triangulation (Denzin 1970)

Type	Description
Data triangulation	Involves the use of different sources of data to examine phenomena across settings and at different points in time
Method triangulation	Entails the use of multiple research methods to compare and contrast the different insights each method may provide

Investigator triangulation	Involves different investigators gathering data to produce more complex empirical accounts by understanding possible differences
Theory triangulation	Where different concepts and theoretical perspectives are used to see how each illuminates the data in different ways

According to Yeasmin and Rahman (2012), triangulation allows the researcher to be more creative in data collection and have more confidence in her results. It provides an opportunity to deal with issues with conventional data collection methods. Single source data might be contested for its reliability and two sources of data can complement each other and provide more trustworthy results. However, multiple sources of data lead to more comprehensive and richer results. Additionally, it provides various perspectives to the phenomenon and might even yield a better understanding of unusual aspects of it. Triangulation helps in fine-tuning the research and assists in better defining and analysing social problems (Yeasmin and Rahman, 2012). For triangulation to be beneficial, the research must have clear theoretical focus. Each method used under it should be justified and represented well, and when one method assumes more importance than others then that should also be justified. According to Yeasmin and Rahman (2012) collecting data from different sources could be convergent. Here data from all the sources are focused on the same overarching question, even though data collected from varied sources may well provide inconsistent insights. In the end, effective triangulation depends on consistent collaboration and coordination by the researcher with her study and participants.

Therefore, due to the use of different, repetitive and unstructured data generation methods, ethnographic approaches to research can generate enormous quantities of data of various kinds and qualities. Thorne (2000) claims that qualitative data collection goes hand in hand with data analysis. This then informs the researcher with the direction in which further data should be collected in order to answer the research questions. To quote Thorne, ‘‘it is important to recognise that qualitative data analysis processes are not entirely distinguishable from the actual data’’ (Thorne, 2000, p. 68). The theories on which the researcher chooses to base her research, the strategy employed in generating data and the understanding that what is relevant data must be considered: these are all investigative processes that then influence the further

data generation itself. Thorne seems to suggest that this is a cyclic process wherein an initial set of data informs analysis and analysis then informs the next set of data and this goes on until the desired results are achieved. Analysis is also a specific process to consolidate and interpret the data to obtain a clear depiction of the study from the raw data. Transforming raw data into meaningful findings presents the researcher with challenges. Analysis therefore has to be very systematic and will normally consists of three parts:

Description: the reporting and describing of data. This step treats data as facts.
Manipulation: the process of investigating relationships, factors and links between different points in data.
Interpretation: drawing inferences, judgements and conclusions from the evidence.

The next section of this chapter will illustrate the process of data generation and discuss the samples used in this study. This section is key to underpinning my data analysis and findings. I have provided the detailed description of my samples and the procedure of my data production.

5.3. Section II: Description of methods

5.3.1. Research ethics

This study was conducted as per the regulations of the UCL Research Ethics Committee. Apart from obtaining my DBS (Disclosure and Barring Service) certificate, I ensured that all the participants, especially the child participants, were informed of the aim and objectives of the study. A consent form was designed for each participant group with the necessary information, in a language suitable for each group. Child participants were provided with a simply worded consent form that was also verbally explained to them in the presence of the Forest School practitioners and in some cases, in the presence of the parents. All participants were made aware that they could opt out of the study at any point in time. Children were observed and interviewed in the presence of the teachers, parents or practitioners. Care has been taken that none

of the photographs captured shows the faces of the child participants. Consent has been taken where adults are visible in the photographs.

5.3.2. Research participants

I chose London to be my field area as it would be convenient for me, both geographically and financially. Through the Forest School conference in March ’17 (See Chapter 6 for more details), I learned more about the concept and recruited my first practitioner participant (Practitioner A). After my initial engagement with the Forest School practitioners, I was keen on understanding their views on Forest School principles. I became a member of three different Facebook groups and followed some key discussions. These discussions contributed to my data (Chapter 6).

My first group (Group A) belonged to Practitioner A, who went to a North London school to conduct Forest School sessions. The two other groups were located at a children’s centre in East London, which conducted Forest School sessions as an after-school club facility. The second school in East London was chosen based on convenience, as it was the closest to the children’s centre. After contacting and meeting with the Head and the practitioner (Practitioner B), we decided on two different groups for my study: Group B and C, which met every Tuesday and Thursday respectively. The data generation period was finalised as between June and July 2017, except for an initial visit to observe Group A at the end of March and before the Easter break as per the invitation of the practitioner. Group A usually had 12-15 children and Group B and C had 15 students each. The key characteristics of the groups are summarised in the following section. However, I would first like to provide some information about the two schools that participated in my study to provide a better understanding of the schools as communities (Table 5.5).

Table 5.5

Information on participant schools

Characteristics	North London School[31]	East London School [32]
Local authority	Haringey	Hackney
School type	Community school	Community school
Ofsted	Good	Good
No. of pupils (2017-8)	456	639
Age range	3 to 11	3 to 11
Gender of entry	Mixed	Mixed
No. of teachers	26	38
No. of teaching assistants	20	28
Pupil and teacher ratio	20.0	16.8

As observed in Table 5.4, both participant schools are very similar in their composition. However, the East London school has around 200 more pupils than the north London school. Based on my observation, the North London School had a very large woodland in the neighbourhood which made it easy for Participant A to conduct the Forest School sessions regularly as part of the school curriculum. On the other hand, the East London school was located in a congested residential area with the Hackney marshes a couple of minutes away.

With respect to the participant groups, Group A attends Forest School as part of the school extra-curricular activity. This means that once every two weeks, Practitioner A

[31] https://www.compare-school-performance.service.gov.uk/school/102092/highgate-primary-school/primary
[32] https://www.compare-school-performance.service.gov.uk/school/100223/daubeney-primary-school/primary

gathers half the class inside the school premises and they go to the nearest woodland together with at least one Assistant Teacher.

Group B and C were part of a children's centre where children came for an after-school club activity. Each group was accompanied by the Forest School practitioner and two trainee practitioners. I observed 42 children in the age-range 5-8 years within the three groups. Eight children were chosen to be interviewed based on varied interests exhibited during the Forest School sessions and on suggestions from the practitioners. Child H could not be interviewed as she failed to attend the final session due to ill health. Parents of the children chosen for the interview were also interviewed, except for one (Parent G) who could not make herself available for the interview, though I was able to have an informal chat with her. Both the Forest School practitioners and the trainee practitioners were interviewed. Additionally, I had a telephonic interview with a Forest School practitioner and a trainer whom I had met at the Forest School conference in March (Practitioner E).

Table 5.6 describes my data generation schedule for summer 2017. I have also discussed the activities I observed during my observations. Interviews of the practitioners and children were conducted either during or after the sessions. Parents were engaged after the sessions when they came to pick their children up from the centre. Parent A and B were frequent volunteers during the Forest School sessions of Group A. I interviewed them during one of the sessions.

Table 5.6

Data generation schedule

Date (2017)	Group	Woodland/School location	Activities
30th March	A	North London woodland	Tight rope walking: the practitioner with the help of the

Figure 5.2

PE teacher (teacher volunteer) tied ropes across two trees in order for the children to enjoy the activity as they pleased. Clay mask making on tree trunks: as the topic at school was Zambia, the practitioner arranged the activity of making clay faces on the tree trunks (Figure 5.2)

15th June	A	North London woodland	Building obstacle course in groups: with the topic school being Roman Empire, both the activities were designed by the practitioner. The children were divided into three groups and asked to make their own obstacle course. Later each group assisted their peers to complete their obstacle courses respectively.

Figure 5.3

Individual medallion making: the session after the break involved making medallions individually (Figure 5.3)

20th June	B	East London woodland	Making a new basecamp: as it was raining, some children were keen on building a new basecamp under the trees where their group could sit around and have snacks without getting wet. They arranged logs in a circular fashion in a secured place (Figure 5.4). Making leaf patterns on a photosensitive paper: this activity was arranged by the practitioner. Interested children were asked to make their own patterns with leaves and stones under the sun.
22nd June	C	East London woodland	Bow and arrow making: many children were keen on making

Figure 5.4

Figure 5.5

bows and arrows that they had learnt to make in the previous session.

Tight rope walking: The practitioner made arrangements for tight rope walking for those who were interested (Figure 5.5).

Bug tepee: some children decided to make a tepee with sticks, leaves and stones for bugs. They made a shelter to avoid getting wet and left some food (slice of banana) in the tepee for the bugs.

27th June	B	East London woodland	Snail graveyard for a dead snail: A couple of children found a dead snail near their basecamp and decided to bury it. They made a snail graveyard with natural materials and placed a cross made of sticks on the graveyard. Wood work: another group of children wanted to make rafts, bows and arrows. Playing with ropes: a smaller group of children made a fishing line with a long stick and available ropes.

29th June	C	East London woodland	Free play: the children were allowed to have a free play session. They climbed trees, made dens and continued with their own fantasy games, such as a fairies' tea party. (Figure 5.6)

Figure 5.6

4TH July	B	East London woodland	Free play
6th July	C	East London woodland	Free play: the session was conducted at a different location as the practitioners were unsure of the safety of their usual woodland. There had been a social event in the woodland the previous night and hence there was a possibility of broken bottles, cigarette butts and similar waste. The new space was a large green area perfect for children to run about. Sand castles: there was a pile of sand in the green and some

			children chose to make sand castles.
14th July	Teacher B	North London school	Interviewed the class teacher of Child A & B
18th July	Teacher A,C & D	East London school	Interviewed Teacher A: class teacher of Child C and E Teacher C: class teacher of Child F Teacher D: class teacher of Child H (who was observed, not interviewed)

The interview questions were open ended and led to conversations between the participants, especially the practitioners, and me. This also ensured that, as far as possible, my personal biases did not interfere with my data collection. The more the participants who engaged with my initial set of questions, the more doubts and queries I had that needed to be clarified. Therefore, during further engagements with the participants and through e-mails, I confirmed their statements. Through this, I have endeavoured to maintain trustworthiness of my data (Hamilton and Corbett-Whittier, 2013). Photographs play a very important role in supporting the claims made by Forest Schools in terms of the activities that were conducted and the extent to which children are allowed to pursue their interests. Care was taken that no child can be identified in the photographs. All the transcribed interviews can be found under Appendix A.

5.4. Summary of the chapter

Research design provides a blueprint to the entire process of the research. It paves the way to finding ‘answers’ (or at least a means of systematic response) to the research problem. My research lies in exploring the relation between outdoor learning

and formal education through Forest School and also focuses on the extent of environmental education. It is a case study research. Case study research is a study of a contemporary event or case or phenomenon occurring in the real-world context. My study is a single (multiple site) case and is an exploratory, intrinsic, embedded case study which looks at a representational event over a period of time.

Constructivism is the theoretical perspective – a foundational principle for me – which links social engagement to education and knowledge gain. The three main sources of data in my study are participant observation, interview and photography. Field notes serve as a record to all my interactions with various gate keepers and participants. In order to confirm validity of the data collected from different sources, I have triangulated the data to ensure that the findings are as dependable as possible.

Furthermore, the data generation process with the three groups of children, four practitioners and eight parents has led to findings that are discussed in Chapters 6 and 7. It was extremely useful to interview a practitioner who was also a trainer. My methods also included engaging with practitioners on Facebook. I have provided the schedule of my data generation process to ensure that my study is reliable as a piece of academic work.

Chapter Six: Analysing data

6.1. Introduction

This chapter discusses the process of analysing the data in this study and presents the data. Section 5.2 discusses the analysis process undertaken in my research. Section 5.3 presents the results from my participatory observations, notes from my field study, interviews and photographs. The findings are presented under four different themes derived from a process of coding and categorisation of the raw data, with quotes from the participants and photographs from the Forest Schools sessions to support my findings. Finally, section 5.4 concludes the chapter by summarising the findings.

6.2. Data analysis process

The data generation and analysis have been directed by the research questions that this research aims to answer. Since this is a case study, a large and diverse data set, including participatory observation, field notes, and voice recorded interviews with selected participants and photographs captured during the Forest School sessions, has been analysed. This has enabled triangulation (outlined Chapter 4), and coding of the interview transcripts has been employed in order to identify analytical themes. This has been a systematic and rigorous process, although I must admit that as an environmentalist, and being positively disposed to the potential benefits of outdoor learning, I have had to restrain my enthusiasm to 'over-interpret' every time a child mentioned nature or environment or spoke positively of Forest School. I am also aware of any effect that my presence may have had on children's performance at the Forest School sessions. For instance, Child C became very self-conscious during the one-on-one conversation with me with the voice recorder and was unable to answer my questions to her very best. I endeavoured to reduce that by engaging with the children before the sessions on a friendly basis, for example, by introducing myself, talking about their day and so on. During the sessions, I ensured that I was simply observing and taking notes without disturbing the activities. Occasionally, children included me

in their discussions, came to me with their findings or asked for help with their activities. This provided me with opportunities to ask questions or get involved in the activities further. Such opportunistic data were recorded in my field notebook.

The interviews were recorded on a voice recorder and transcribed. The first stage of analysis was to compile a list of frequently used words in interviews to obtain the preliminary understanding of the data (Table 6.1).

Table 6.1

Frequently used words in interviews

Serial no.	Frequently appearing words	Frequency of the words
1.	Fun	7
2.	Climbing	7
3.	Playing	17
4.	Building	6
5.	Safe	2
6.	Forest	7
7.	Woods	10
8.	Nature	21
9.	Environment	5
10.	Season/Weather	7
11.	Science	7
12.	Maths	3
13.	Funding	4
14.	Affordability	3
15.	Creativity	4
16.	Poetry	2
17.	Outdoors/Outside	22
18.	Independent	3
19.	Leadership	7
20.	Confidence	5

21.	Environment	10
22.	Friends	5
23.	Insects	7
24.	Trees	12
25.	Plants	8
26.	Communication	4
27.	Problem-solving	6
28.	Teamwork	10

Stage two involved using the software NVivo to create nodes with the help of frequently expressed sentiments, common concepts and statements amongst all the interviews and field notes (Table 6.2). NVivo assists researchers to consolidate and analyse data from various sources and formats in one place. It is mostly useful in quantitative and mixed method research[33]. Nodes on NVivo form the foundation that help in collection of emerging patterns and ideas in the data[34]. Organised collection of nodes that have similar concepts can then help the researcher to form themes in the study. At this point, I should admit that this was a potentially overwhelming process and it took me a while to comprehend the process and to handle the data. NVivo enabled me to look at interview transcriptions of various participants together and note the commonalities in their description of Forest School experience. As I spent more time with my data and read the interviews more, I became comfortable with the process of content analysis.

Table 6.2

First set of nodes on NVivo (alphabetically)

Serial no.	Nodes
1.	After school
2.	Change observed by parents
3.	Change observed by Forest School practitioners (FSP)
4.	Changing Forest Schools

[33] http://www.qsrinternational.com/nvivo/what-is-nvivo
[34] http://help-nv10.qsrinternational.com/desktop/concepts/about_nodes.htm

5. Child-led (teachers)
6. Child-led (practitioners)
7. Child-led (parents)
8. Children liking Forest Schools
9. Choice to be FSP
10. Evaluation process
11. Expectations form Forest School
12. Feedback for parents
13. Forest School and funds from school
14. Forest School and schools (teachers)
15. Forest School and schools (practitioners)
16. Forest School and schools (parents)
17. Forest School enables (children)
18. Forest School enables (teachers)
19. Forest School enables (practitioners)
20. Forest School enables (parents)
21. Forest School learning transferred home
22. Forest School rules
23. Forest School schedule
24. FSA involvement
25. FSP job satisfaction
26. Learning at Forest School
27. Outdoor learning (children)
28. Outdoor learning (parents)
29. Measuring outcomes
30. Outdoor and Forest School (parents, practitioners)
31. Outdoor learning and formal education (parents, practitioners, teachers)
32. Parent volunteers
33. Parents in drop-in sessions

34.	Parents and Forest Schools in schools
35.	Parents and Forest Schools as after-school club
36.	Preparations into Forest School sessions
37.	Reasons to choose different training companies
38.	Reflecting on Forest School in class
39.	Risks for FSP during sessions
40.	Difference between Forest Schools in school and as after-school
41.	Volunteers
42.	Why become an FSP?
43.	Willing schools
44.	Worries for FSPs

Stage three involved me aggregating nodes into different themes. I categorised nodes (Table 6.2) based on my interview questions for each group of participants. As a first attempt, I used the interview questions as my steppingstone to form a connection between the nodes and my research questions. This also helped me to get a firm grip on this process, making it less anxiety-inducing and more interesting. As described below, each of the eight themes has a pattern for itself. Each theme describes a certain feature of Forest School from the point of view of parent, teacher and child participants, except the theme specifically on Forest School practitioners.

1. Understanding of Forest School
   - Parents - What is Forest School?
   - Teachers - What is Forest School? Where did you learn about it? - Time out in the nature, gardening, something to do with being out in park
   - Children - What is Forest School? - Fun, I can build anything, play

2. Accepting and implementing Forest School
   - Children - How do they find forest School session? Love it! Lots of fun. Meet my friends
   - Parents - Thoughts on how beneficial or necessary is Forest School. All play? More Forest school sessions?

- Teachers- Would they like Forest School included in curriculum? Will the school appreciate it? Funding, feedback.
- Affordability for parents

3. Why become a Forest School Practitioner?
   - How did you get involved?
   - What are your qualifications?
   - Where did you get the training?
   - Understanding of Forest School based on training
   - What are the worries and risks?
   - Dealing with parents
   - Volunteers for Forest School sessions
   - Parents as volunteers - merits and demerits
   - Preparing for sessions
   - Support from schools
   - Practitioners who are also parents to children going to the same school

4. Outdoor learning, Forest School and formal education
   - Differences between Forest School and outdoor learning
   - Linking outdoor learning to formal education - teachers, parents, practitioners and children
   - The source of knowledge may not be important for the children when they express it at the Forest School Sessions. Example - Medallion representing fire, water and earth.
   - Emotional responses to nature and natural features by children (participatory observation and interview)

5. Reflecting on Forest School sessions
   - in the classroom
   - at home
   - Remembering previous sessions
   - Changes observed in children by parents and teachers

6. Forest School being child-led
   - Is it a good practice? Teachers, Parents, Practitioners
   - Child-led vs Child-initiated

7. School Forest School sessions vs After-school Forest School sessions
   - Differences in sessions
   - Practitioners' involvement
   - Parents' involvement
   - Children's perception
   - Differences observed by participatory observation

8. Potential improvements in Forest School

- Practitioners - in practice, role of Forest School Association, in policies by schools and the Government
- Different groups of Forest School Practitioners with different views on what Forest School is based on, where they were trained and who conducted the training.
- Teaching of experiential learning and other theories.

Stage four of the analytic process involved condensing the eight themes into four analytical themes as I recognised that some of the themes could be merged together (and in any case, eight themes felt too many to support clear analysis). This process of 'reduction' was intended to achieve and present a concise but well-defined data analysis. I revisited the eight themes and the data and re-categorised them based on common conversations, topics and themes. Each theme then had to be renamed so that it clearly represented the discussion below and offered more analytical potential. Section 6.3 describes the four analytical themes I finally settled on at the end of this process – which in essence was a long process of conversation between the data and me.

My endeavour to compose a meaningful and coherent argument through the four themes takes me back to the beginning of this journey as I consider it to be important to share my initial experiences with and perception of Forest School. Additionally, it will also assist me in validating and justifying my findings and further discussions. I was completely new to the concept of Forest School due to the considerable change in the topic of my research as explained in Chapter 1. I concluded that in order to learn about Forest School, I must completely immerse myself in the functioning of the concept not just by reading about it, but also by engaging with the practitioners and the discussions. Firstly, I became an online member of Forest School Association. I then enrolled myself into a conference that was held on the 18th of March 2017 at the Shortenills Environment Centre in Buckinghamshire. The conference was aimed at providing the current and potential Forest School Practitioners with an introduction to various tools and techniques to engage children and young adults in woodland activities. My first lesson was that this wasn't a regular academic conference. I was the only participant in more formal attire, while the rest of them were in waterproofs and wellies. That is when I realised that most of the conference would be held outdoors in the cold and the rain! The workshop began with a plenary session

discussing the current anxieties around the perceived dangers of outdoor play for children. This session presented a case of concerned parents who did not want their children to get physically hurt while playing, leading to increased participation of children in indoor games and activities, including video games and television. Moreover, parks now routinely 'carpet' play areas with rubber flooring in order to protect children from getting hurt. I was surprised to learn that even local authorities are concerned about the 'dangers' of outdoor play, sometimes encouraging parents to engage in indoor activities or having children wear helmets when playing outside. Dense urban areas like some parts of London add to this problem by providing fewer and fewer 'natural' environments in which children can spend time around their homes, and parents may not have the time or inclination to accompany their children for playtime far away from home.

After this very insightful and partly amusing plenary (because all of the participants were pro-outdoor learning), the participants separated into groups for various sessions. I chose my workshops based on my study area. My first workshop was 'Making Learning Stick'. This workshop was about how to use the environment around to facilitate deep learning to promote behavioural change. This outdoor workshop introduced active ways to help children and practitioners review learning before, during and after an experience, as well as on their own, in pairs and in larger groups. An example here was to divide the participants into four groups based on whether they had held a frog and the likelihood of their ever doing it again. Once in four groups, the participants were then asked to discuss their choices. This activity specifically was conducted to make participants think about their own preferences as well as about others'. When the workshop leader queried the participants about John Dewey and experiential learning, I felt I was in a position to answer his questions and partake in the discussion in a theoretically informed way, in particular the explanation of experiential learning.

My second session was called 'Urban Forest Schools'. This session explored the use of immediate available green surfaces to conduct Forest School activities. This was also an outdoor workshop with activities aimed at engaging children and a discussion of how this might affect their learning. At the beginning of this session, the Forest

School leader asked the participants to discuss what Forest School was. Prior to the activities, the Forest School leader initiated a discussion on Forest School and as a participant, I took active part in it. After a brief thank you note, the conference was closed. During the entire day, I engaged with various Forest School leaders and practitioners, introduced my study and encouraged a discussion. All of them welcomed my study as there is a constant discussion around the importance of outdoor learning in formal education. Almost all of them were keen to be part of my study. By the end of the day I had met a lot of Forest School practitioners, learnt a lot about their personal experiences as practitioners, engaged with them through activities and made friends with and recruited my first participant.

The following section will introduce my data in four themes. The participants are identified only by the letters of the alphabet assigned to them.

6.3. Analytical themes

The four analytical themes emerging from my data and the analytical categories for each are the following:

1. The Forest School concept
    - Going to the forest
    - Having fun
    - Learning about nature
    - Keeping safe
    - Team-work and problem-solving
    - Child-led learning
2. Forest School in practice
    - Doing *anything* and being happy
    - Loving and learning about nature
    - Outdoor learning
    - Funding and affordability
    - School and after-school sessions
3. Forest School practitioners
    - Introduction to Forest school
    - Level 3 Practitioner certificates
    - Being a practitioner
    - Place for Forest School
    - Open for change

4. Forest School and formal education
    - Learning about nature and plantation
    - Creativity and imagination
    - Strengthening classrooms and home links
    - Previous sessions
    - Outdoor learning and formal education
    - Protecting trees

As discussed in the previous section (6.2), the four analytical themes arise from the process of coding or creating nodes from the raw data. Each theme has been broken into several analytical categories in order to analyse and discuss the data clearly. These themes and categories enable a response to my research questions. The themes also raise new points of discussion, ones which I am very excited about as a researcher and a committed environmentalist. This also links with aspects of my literature review and probes further into the process and aims of Forest School and outdoor learning. I do acknowledge that my themes are quite interconnected and some of the points may overlap. However, during the interview and conversations in the field, the participants were frequently reiterating their statements and emotions under different contexts, and maintaining a sense of interconnection and 'wholeness', which seems important in the reporting of this research, and authentic.

I condensed the eight themes and narrowed them down to these four particular themes by looking at the conceptual and content similarities that different themes had with each other. I also acknowledged that the fewer themes I had in the end the better my content description and discussion would be. In order to answer the research questions effectively, I have sought to present my data succinctly while at the same time meeting the aims of my research.

6.3.1. Theme 1: The Forest School concept

The first analytical theme discusses various perspectives of different participant categories about Forest School, its principles and benefits. I have endeavoured to capture and discuss the real essence of Forest School for different groups as my engagement with my participants showed that different groups and participants within the groups had different reasons to acknowledge Forest School catering to various needs of their own and the others. This analytical theme is further discussed within six analytical categories.

Going to the forest

Most child participants referred to Forest School sessions as going to the forests and/or woods. Some correlated that to climbing trees and building 'things'. I have observed children building dens with logs and sticks within all three groups. For instance, Group B built a new base camp with logs under some trees as they wanted one that provided shelter from rain. Child E explained Forest School as 'It's when you go walking around in the forest building things, building out of woods, making rafts, you can do anything'. Parents unanimously agreed that Forest School was an opportunity for their children to spend time outdoors and explore nature/woodland.

Most parent participants referred to Forest School as an opportunity to spend time in woods or outdoors and engage in activities, which they deemed important for health benefits and an all-round education. Parent F summarised well that 'Forest School is a chance *(for her child)* to get outside, learn about nature, enjoy outdoors in whatever weather. It is an opportunity to escape from the city living'. It is also an opportunity to get fresh air.

Class teachers, on the other hand, where not very sure of what Forest School was. The difference was more evident in teachers from schools where Forest School was a part of the planning and those teachers who had students going to the after-school club. This will be discussed further below. Teacher A had learnt about it from one of her colleagues and was eager for it to be introduced in her school. All the teachers agreed that Forest School was about spending time in the environment and engaging in outdoor activities. They suggested nature, woods, trees, gardening, parks and flowers with reference to Forest School.

My interpretation of the understanding of Forest School by parent and teacher participants was very plain and clear. Even if some of the participants (for example, Teachers C and D) were not clear about what exactly Forest School was, their attempt in explaining it to me was as simple as the name of the concept itself. The term 'Forest' and 'School' in the name of the concept helped them to have an idea instantly as a method of outdoor learning or spending time outside in the 'forest'. Child participants, in my opinion, enjoy their sessions because they perceive it as their time to participate in activities more freely and out in the woods.

Having fun

Many child participants were thrilled about having fun at the Forest School sessions and playing with friends. Child B claimed he has fun every time he goes for Forest School sessions. Similarly, Child D said, 'I love playing with my friend (Child C) and like climbing trees with her'. For child participants, it could mean free playtime with very few restrictions. These restrictions are usually regarding safety and may include the process of the activities themselves. But mostly, the idea of Forest School for child participants, according to my interpretation, is having fun, playing and making things with friends and peers. Some of the groups within each Forest School on every visit chose to keep themselves engaged on their own. They played games, built dens and a particular group of female child participants decided what game they would play that session as they walked to the woodland. It usually consisted to imaginative role playing as fairies and witches.

Learning about nature

Some of the participants linked Forest School to learning about nature, environment and plants. For Parent E, whose child goes to the after-school club, Forest School was an after-school facility where children are taken out to the forest and taught about plants and insects.

Most parents mentioned learning about plants, insects and trees, and other outdoor activities such as building fires and whittling sticks. Similar to linking Forest School to forests, participants referred to Forest School with respect to learning about nature whilst spending time in the woodland.

Keeping safe

When discussing the rules that the children must follow during the Forest School sessions, all the participants agreed to the rules making them safer and were able to recall the rules as taught. These rules have been fairly similar across all the three participant groups. They include: no picking, no licking (do not pick anything in the woodland, and lick or consume it), no crossing boundaries (the area of activity has been explained to the children from the beginning and is revised everyday), no high jumping, look after self, each other and the woodland and pee at the pee tree. If

anything is bigger than you, then it takes two to lift (this is useful when children are building dens or similar structures), do not kill plants, do not break others' property. Rubbish in the bin. When running be careful, and 'X-factor' when you see dogs (in order to not encourage dogs and avoid the possibility of getting distracted from activities or even getting bitten, the students are asked to cross their hands across their chests and look up).

The most useful rules for the practitioners was 'one, two, three where are you'. This is for the practitioners to keep a check on the students as they run about and explore the woodland. When asked 'where are you', the children are meant to respond by 'I am here' from wherever they are located. This is also used to sign the break or end of the sessions in order for them to collect around the practitioner for further instructions.

The child participants mentioned the danger of talking to strangers, getting hurt, getting lost and dealing with dogs, although one student questioned one of the rules, stating that most dogs are friendly and therefore, they should be allowed to interact with them. Child G specifically said the rules make it easier to have fun. This provided me with insight about children understanding the place of rules - not just based on their preferences. Child G likes dogs and based on her previous pleasant experiences with them, she would appreciate opportunities to be friendly with dogs in the Forest School sites. All in all, most child participants appreciated the rules and understood that they are meant to keep them safe during the sessions and hence help them have a good time or have fun outside. They also acknowledged the presence of the practitioners and respected their authority. For example, the walk from the school or the children's center to the respective woodland was always covered in single file. Choice was given to the children to choose who would lead and most children seemed to be mindful of the decisions made prior to the walk towards the woodland throughout the journey and back.

Team-work and problem-solving

Teacher A mentioned that the Forest School activities promote teamwork and problem-solving. Similarly, Teacher D emphasised that the child-led environment of

Forest School is good for problem-solving and team-work exercises in Math and Science. According to this particular teacher participant, as nature primarily involves the flora and fauna, it is an appropriate place to conduct Science classes. Additionally, due to the sheer number of different species in the woodland, Mathematical concepts such as addition, multiplication and division can be applied in that environment. Similarly, since Forest School involves a lot of activities in teams, the probability of improving teamwork and problem-solving abilities were high. However, she also discussed the constraints that schoolteachers face with respect to the syllabus and time frames and their lack of opportunity to conduct child-led sessions within the classrooms themselves. Teacher B mentioned the importance of sustainability, living in the woods, survival techniques and safe environment. There is therefore a suggestion through my study that teachers involved are aware of, and value, the complementary nature of Forest School activity and more constrained classroom work.

According to Sara Knight (2016), the Forest Schools ethos stresses the positive effect of teamwork, problem-solving and leadership qualities. There was a clear link between my data and the literature, although clearly my study is limited in its scope and time frame.

Child-led learning

Both the teacher and the practitioner participants had positive views regarding the child-led practices of Forest School. Teachers claimed that child-led learning is the way to learn, even in the classroom. Two teachers supported child-led learning as being prevalent in their classrooms. For instance, the books children would like to read in the class during the break time or free class period are suggested by the children. Supporting child-led learning, Teacher A nevertheless agreed that the onus is still on the teacher to provide an appropriate learning opportunity within the classroom itself. ‘Skilled teachers are those who offer right opportunities and child takes it from there. They have guidance and have choice. Rather than the product, it is the process. That is the beauty. It is not the outcome but how you get there’. At the same time, she said it teaches children the life skills to get their desired results. ‘Preserving, planning, what steps to get the results that is essential as a life skill’. On the other hand, Teacher B firmly stated that Forest School is child-led to an extent but in the end the children do

perform the activity designed for the session by the practitioners - and hence it is really *led* by the adults.

Forest School practitioners were all determined to base their work on the principle of child-led learning. According to all of them, children cannot be forced to learn. They must be allowed to pursue their interests. Hence, if some of the children do not want to engage with the Forest School activities but want to, for example, build a den, then they should be supported appropriately. Practitioner B associated this with the Montessori based learning, as she was from the nursery background. Practitioner D explicitly mentioned that sessions never go as planned. Children always surprise the practitioners, and the main goal is therefore to encourage and then enrich their initiatives.

Furthermore, two out of five practitioners were keen to stress the significance of engaging children in the Forest School session by allowing them to do what they wanted, but not as an end in itself. As children are doing what they feel like doing, the argument was that they then slowly get attracted to, or gain interest in, the activity at the Forest School. Thus, Practitioner E preferred to characterise Forest School as child-*initiated* rather than child led. He claimed that if the sessions are termed child-led then sessions might not reach the achievable learning goal. The principle for Forest School being child-initiated, wherein the children are allowed to be free - but at the same time are being directed towards the planned activity – raises an interesting and possibly significant tension in how Forest School is understood and how it is perceived to link to more formal learning (and the school curriculum).

This appears to be similar to the discussion around traditional and progressive education. Even within Forest School there seems to be a conflict between how and what child-led learning is. The key question here is whether, at the end of the day, Forest School is adult-led. Traditional learning is known for its adult-led characteristics, with children being more or less passive ‘recipients’ of the teaching. Progressive education is, on the other hand, more child-led. Following Dewey (1939), if progressive learning is based on the freedom of the learner then how freedom is defined is crucial. During my observations, I noticed certain children never being very keen on Forest School activities unless it aligned with their interests. And by default, children *are*

allowed the liberty to choose their activities. This included the child who was very curious to find tree fairies and goblins. To me it seemed that the ethos here was to teach and learn the idea of respecting each other and to appreciate different ideas, which is a desirable, if somewhat broad, learning goal in itself. However, if Forest School sessions are meant to have their own more particular aims (and the teachers may wish to extend these to servicing school curriculum aims in some way), then how far the children are allowed to follow their own ideas during the sessions (as mentioned by Practitioner E) becomes a very tricky question to resolve. The distinction made between child-led sessions and child-initiated learning reflects the presence of this question, at least in the minds of some practitioners. The distinction seems important in that it encourages a pragmatic combination of traditional and progressive approaches to education.

6.3.2. Theme 2: Forest School in practice

The second analytical theme discusses the practical aspects of Forest School sessions and is divided into five analytical categories. The reasons children and parents like Forest School, the manner in which it is conducted and the cost of the programme are presented under this theme. According to my field notes, once the children reach their usual woodland with the practitioner, they first go through the rules they must follow and are then informed about the activities that have been planned for the day. Some children stay with the practitioner and learn more about the activities. Some run away and start playing on their own. I also observed that these children eventually join other groups as they get curious about the set activity.

There were exceptions. One of the children from Group A was, as I reported in the previous section, very interested in fairies and goblins. I spent some time talking with her while walking into the woodland. She wanted to find tree fairies and catch goblins. The practitioner acknowledged a different level of imagination in her and allowed her to create her own games. Eventually she built a trap to catch goblins. Interestingly, some children joined in with her. Similarly, the after-school club had one child who was, according to her teacher, on the autistic spectrum and only enjoyed building dens with sticks. The practitioner was not sure how severe his condition was but he certainly had improved in is behaviour towards his peers in the group as initially, he refused to

engage. He was allowed to pursue his interest with sticks and logs at all times and he almost never participated in group activities. Based on my observations, this child followed instructions, stayed with the group, occasionally led the group or preferred to walk on his own exploring his surroundings, and then once at the site would start collecting logs and sticks for his den. He also got used to me being around and started playing with me at the center while we waited for the others to join us or asking me for help with lifting heavy logs. This could be a good example of Forest School providing opportunities to children with cognitive health issues in managing their presence with peers and allowing them to choose their preferred activities in fresh air and free learning space. This is in line with the section on Forest School for students with disabilities in Chapter 4, as this was the only such case I came across during my study.

Doing anything and being happy

All child participants liked going to the Forest School sessions because they had 'fun'. Child G linked two aspects: learning about the forest and having fun in the forest. As discussed in the previous section, children were allowed to do what they wanted, including or excluding the sessions planned. Child C said coming to Forest School sessions made her happy. Child E frequently exclaimed about being able and wanting to do 'anything' at the sessions. The idea of being outdoors, being able to climb trees (Figure 6.1), making bows and arrows, building rafts and dens, jumping off broken trees and logs (Figure 6.2), made children excited and led to having fun.

Potentially, Forest School seem to be a more exhilarating and joyful experience than sitting still in the classroom and following a strict timetable with very specific compulsory activities. But there is no evidence that in the children's minds at least, having fun in the forest complemented school or had any connection with the classroom: it was simply different.

Figure 6.1

Figure 6.2

Loving and learning about nature:

Child G summarised, 'Yes (*I like forest School)*. It is where you learn about nature and do things and it is fun'. Similarly, Child D claimed that he loved nature and hence liked Forest School.

Based on the broad concept of education *for* the environment, Forest School seems to contribute – at least for these children – by providing opportunities both to learn *about* environment and *in* environment. Child participants enjoyed their time in the woodland and learnt about the specific woodland they visited frequently. The practitioners introduced them to the names of commonly found plants, trees and insects and they were asked not to harm the environment during activities. It seems therefore that through the informal learning for the environment during Forest School sessions there is at least the potential, whether or not it is explicitly recognised by the children, of enhancing the more formal classroom-learning in school by the provision of a vocabulary and direct experience from which to draw.

Outdoor learning

Teachers endorsed Forest School as it provides children with outdoor learning experiences which were thought to have intrinsic value. They agreed that learning outdoors and being in nature is good for children and they would like to include outdoor

learning as part of their curriculum. However, there were uncertainties, such as Teachers C and D were unsure whether the children would enjoy being outdoors during the winter and in rain. Teacher D talked about teaching about plants by bringing plants into the classroom, following which she also agreed that she could instead encourage the class to step outside to observe plants as part of her Science class. ~~H~~However, two teachers mentioned going to the school garden for poetry sessions, and organising field trips to the local parks during summer, as if to stress their commitment to learning outdoors.

This seems like a key difference between the Forest School and outdoor learning generally understood in the schools in this study; that Forest School is a programme that continues all year around. Children spend a certain amount of time outdoors regularly as part of their learning experience during all weather conditions throughout the year, given that they would be appropriately dressed for the weather. As part of the programme children are provided with an opportunity to engage with nature in her different forms and observe the changes in the flora and fauna of the same woodland. This could enhance their learning and understanding of the environment around them and therefore, a sense of appreciation towards it. This contradicts the teachers' perception that children would not want to spend time outdoors during the winter and the rains. Similarly, all parents agreed that Forest School sessions were beneficial for their children. They also were happy for their children to spend some active time outside their classrooms and homes. Some of the parents specifically mentioned the idea of spending time in nature while living in a city, as there are fewer opportunities to do so. This sentiment was expressed by Teacher D as well. In her perception, most children live far away from green spaces in cities and parents may not have the resources or the inclination to take them to a park or camping to give them a taste of life around trees and other natural elements. Therefore, Forest School is an opportunity to get some fresh air.

Funding and affordability

Most teachers (Teacher A, B and C) expressed concerns about funding for Forest School at their school. Teacher D mentioned the recent cuts in education funding by the government and that it had affected educational programmes in schools. However,

Teacher B, reporting on Forest School being part of his school activities, commented on the integral role it plays in the school's ethos. The school had introduced Forest School sessions in the academic year 2016-7 for Reception to Year 3 and children had sessions bi-weekly.

Both parents and teachers mentioned the affordability of the Forest School sessions as an after-school activity, for a set period of six months with weekly sessions costs £600 per child. Teacher C also identified affordability from the point view of parents as an issue, supporting school-funded Forest School programmes to benefit all the children in their class, rather than just those who were able to participate in the parent-funded after-school activity.

School and after-school sessions

Observing groups in two different settings led to an interesting contrast: that between Forest School in school and as an after-school club. It appears to be normal practice that Forest School practitioners can approach schools and work with them to provide sessions for the students. Schools can choose to introduce Forest School with the help of a few in-house teachers who are interested in outdoor learning and coordinate the programme with the practitioners, funding permitting. For example, Practitioner A started by providing Forest School sessions in the school free of cost for the participants, until the programme was eventually funded by the school. Since the academic year 2016-7, teachers have been involved in the programme and they coordinate with the practitioner to organise sessions and topics based on which the practitioner designs activities. This is founded on clear and timely communication between the teachers and the practitioner. Class teachers play a major role in the organisation of Forest Schools in the class schedules.

According to Teacher B, the class was divided into two groups: 'higher and 'lower ability' groups. These groups are based on the students' academic performance thus far. The time-table for the students is based on one group attending the Forest School session at a time. For example, when one group is sent away for the two-and-a-half-hour session of Forest School into the nearby woodland with the practitioners accompanied with either two parent volunteers or teacher assistants, the other group

is given mathematical or literary tasks based on its ability. The practitioner is also informed about the curriculum topic at least two weeks before the session so that the activities can be based on the topic. For example, I observed children building their own obstacle course (group activity) and making medallions (individual activity) in the woodland as the topic in school was the Roman Empire.

Teachers ensure that the children from their classes assemble at the school meeting hall to meet the practitioner for the Forest School session. As the sessions are part of the time-table, the parents are aware that they must send their children in appropriate outdoor clothing. For example, the children must have outdoor clothing that covers them fully to ensure protection from insect bites, appropriate shoes, and wellies if is raining. Practitioner, children, parent volunteers (if available) and the teaching assistant walk towards their nearest woodland. A break is provided between the sessions and snacks (fruits and cookies) are provided by the practitioner and parent volunteers (not compulsory). The entire process lasts for approximately 3 hours and once back at school they join their peers in the classroom.

On the other hand, after school sessions are based at the children's center away from the school. Either the practitioners collect the children from the school or the parents/care takers drop the children at the centre once a week. Joining the after-school club is a decision made by the parents and the children. Children wear clothing that covers them completely and are provided with waterproofs and wellies at the center if they don't have their own. Before leaving for the session, the children have a snack which they have brought from home. Two trainee practitioners assist the practitioner through the sessions. Once they walk to their usual woodland, they assemble at the basecamp. A basecamp is the location to gather around together for instructions, regrouping and snacking. This is usually a sheltered space in the woodland with logs placed in a circular manner to sit around in a group. The basecamp is built by the children with the help of the practitioners. Once the practitioners introduce the activities, children disperse to either follow the instructions or to play on their own. In my observation, most children prefer to continue with their own games. The session lasts for about an hour in the woods. Once they regroup at the basecamp, they are given some snacks and water by the practitioner and then they head back to

the center. Parents come to collect their children and many of them come straight from work.

I was not aware of this distinction of Forest School at school and as an after-school club. Until I was introduced to the children's center I was under the impression that Forest School are made available only in schools. As an after-school club, Forest Schools is treated both as an after school-activity and as a care center for working parents until they are free to collect their children after work. This to me seemed useful and convenient both for the parents and the children. Parents are assured that their children have adult supervision until they are taken home after school and children have playtime after school. However, this also means that there is more of an opportunity for free playtime and fewer organised activities as part of the after-school Forest School sessions.

6.3.3. Theme 3: Forest School Practitioners

The third analytical theme discusses the various aspects of the Forest School practitioners themselves and is divided into five analytical categories. This theme explores the reasons for becoming a practitioner, the route they took and the choices they make every day. This theme to me is intriguing as conversations with Practitioner E led to unexpected findings for my study. On a personal level, it was very interesting to engage with the practitioners and learn about their professional journeys and their personalities. In this regard, I must mention that Practitioner D was a native Spanish speaker and therefore found it difficult to express himself to his fullest ability in English. I assisted him in understanding the questions on several occasions. On the other hand, Practitioner C was also a native Spanish speaker but was full of enthusiasm and wanted to contribute more. She herself approached me for an interview and talked to me at length about her experience as a trainee practitioner.

Introduction to Forest School

Most practitioner participants heard about Forest School for the first time through their colleagues and/or friends. Practitioner A first came across the Steiner philosophy[35]

[35] Steiner philosophy aims at holistic development of children; spiritual, creative, academic and physical. It is considered a progressive learning method and focuses on the joy of learning. https://www.steinerwaldorf.org/steiner-education/what-is-steiner-education/

through her children's kindergarten and was interested in it. Then she was introduced to the Forest School through a friend and she decided to become a Forest School practitioner herself. She had been a practitioner for 18 months when interviewed for this study. Initially she offered sessions for free in the school where her son was enrolled. Since the academic year 2016-7 the school started funding the programme after acknowledging it as a productive extra-curricular activity. Similarly, Practitioner B claimed that as an individual she has always been interested in being outdoors. When working at a kindergarten she came across a colleague who was working with Forest School and started volunteering. Slowly she was convinced to become a practitioner herself. Practitioner E, on the other hand, was a Geography teacher and left his job to work with a Forestry organisation where he heard about Forest School for the first time and decided to peruse it further. The other two practitioner participants were trainee practitioners being trained by Practitioner B at the children's centre. They had already worked with a wildlife shelter in the area of outdoor education in Spain. This involved taking children around the shelter showing them animals. They learnt about Forest School through friends in England and were more excited about the idea of engaging children in the outdoors, rather than taking them for a walk.

Practitioner E is a Level 3 trainer and believes that most practitioners come from education related employments. With that experience they develop a disaffection towards today's education system, as they conclude that it does not cater to all children. They see Forest School as a means to reach out to all children at the same time, considering that children have different levels of understanding and grasping and therefore having them in the same classroom and providing them the same level of resources and attention may not be sufficient and appropriate. Therefore, practitioners consider Forest School as a space to provide appropriate opportunities to children who require different levels of attention and activities. This could be considered a drawback of 'traditional' education which places all learners in a classroom and imparts the same knowledge to all of them in the same form.

Level 3 practitioner certificate

All practitioners must have the Level 3 practitioner training certificate. They have obtained this from some of the various options available today, such as, Forest School

Association, Bridgewater College and Forest School Training Initiative. According to my data, practitioner participants were introduced to these different companies through the individuals who introduced them to the concept of Forest School. For example, Practitioner B volunteered for Forest School sessions with her colleague at her kindergarten and therefore was introduced to an opportunity to train with the same company as her colleague. According to Practitioner E, because of being trained by various organisations, every Forest School trainer carries a different idea around Forest School and therefore every cohort of students has a different idea of what Forest School could be. Some groups claim that Forest School should be the only mode of learning and some believe Forest School must go hand-in-hand with the school curriculum. Practitioner E initially advised me to join various Facebook groups on Forest School suggesting that the presence of different Facebook groups for one concept points to the fact that practitioners feel differently about the same concept.

In order to understand different training styles[36], Table 6.3 provides a glimpse of the Level 3 qualification course structure approved by the FSA and the Wild Learning. The table provides just the bare bones, but it is perhaps helpful to flesh this out with reference to the 10-day course set out by Practitioner E. The training is divided into 10 sessions on ten consecutive days. Day one includes activities such as earthwalk, getting introduced to the paperwork involved in Forest School sessions. Introduction to knots and games and an overview of Forest School principles. Day two begins with reviewing the principle, introduction to using fire and using tools to saw and drill. Day three involves research into Forest School practice, more knots and traps, Leave No Trace (LNT) principles, which is a set of outdoor ethics and practices that are environmentally friendly. Day four begins with a lecture on woodland history and management, techniques involving surveying of the woodland, identifying plants, introduction to knife use, making chopsticks and platters with wild garlic, nettle crisps and mini mushrooms. Day five includes a session on woodland management, visiting two different types of woodland, comparing coniferous and deciduous ecosystems. Using storm kettles, charcoal making and whittling are included in the end. Day six involves various play sessions, such as rope swings, nets, slacklines and story

[36] http://richardirvine.co.uk/2016/06/forest-school-training-caveat-emptor/

making. The day ends with a session on more drilling, especially, bigger holes. Day seven introduces the participants with Experiential Education theory, following which the use of combination locks. Later using clay and water in Forest School sessions to make blobsters, faces and clay beads and pots is discussed. The final session is on firing. Day eight includes using pewter in the outdoor fire, then participants are allowed to freely explore with tools. The final session is one of the key aspects of Forest School sessions which is to conduct a risk assessment. Day nine begins with practical skills assessment, peer assessment and finally, tutorial to cover anything that the participants want to cover. Day ten continues with practical skills assessment, followed by debris shelters in groups and then a Group cooking of 3-course meal on the fire. The day ends with a final review and feedback of the course. The course designed by Practitioner E covers all the basics of Forest School concept and practices. However, the addition of Experiential Learning theory as part of the Level 3 qualification is noteworthy, as I have not been able to spot that in any of the following Level 3 qualification courses.

Table 6.3

Forest School Level 3 qualification course

Open College Networks (learning hours: 155)	**Wild Learning (learning days: 8.5)**
Unit group 1: Module Forest School programme: Delivery	Unit of study 1: Supporting learning, Play and Development in the Outdoors
Unit group 2: Forest School programme: Learning and Development	Unit of study 2: Forest School Leader
Unit group 3: Forest School programme: Planning and Preparation	Unit of study 3: Observation and Evaluation of Outdoor learning
Unit group 4: Forest School programme: Practical skills	Unit of study 4: Sustainable use of Natural resources

Unit group 5: Forest School programme: The woodland environment	Unit of study 5: Teaching outdoor practical skills

There appears to be quite wide variation – or a lack of standardisation – in the way a Level 3 qualification can be obtained. For example, Table 6.3 shows different time requirements during which the training is conducted: 8.5 days, 10 days and 155 hours. Furthermore, the modules are combined in varied ways and, according to personal testimony, Practitioner E administers the units in form of sessions which are determined by personal preference. To obtain the certificate, the participants must complete a portfolio and a practical test. Organisations are allowed to design their own assessment techniques. As part of the training, theories such as experiential learning are taught by some trainers (Practitioner E) and some do not consider them important. Participant E also claims that it is important to teach such learning theories, to practitioners in order for them to understand more deeply the significance of Forest Schools and a practitioner's role as an educator. My preparation for Chapter 2 led to my understanding of John Dewey's popular theory on learning through experiences, but also his discussion around traditional and progressive learning. The concept of keeping both these modes of learning in line with each other to enhance the learning experience of students intrigued me and made me think about my own practices as an educator. My own experience of teaching and this research have made me believe that theories of learning, such as John Dewey's, can be useful tools for teachers, educators and facilitators to engage in self-introspection and improve their own practices. As a teacher, researcher and an environmentalist, I would suggest that including experiential learning theories in the Level 3 training curriculum for Forest School practitioners could and would benefit them and the children. This would assist them in being aware of the circle of experiences and thereby learning could lead to more productive and effective sessions and also aid in falling back on previous activities and sessions. Based on my interview, children do not tend to remember the previous Forest School sessions. This potentially can be remedied by linking activities through the sessions, therefore, leading to a chain of experiences and learning. This could be specifically targeted at children's personal, social and environmental growth.

As I became a member of FSA for my research, I was curious to know how far the association was active amongst Forest School practitioners. It appeared that those practitioners who were not trained by the FSA were either not aware of the association or were not interested in the organisation, though Practitioner B appreciated the conferences organised by the FSA for professional development. Regarding FSA's role beyond the Level 3 certification, Practitioner A stated that FSA had no say in how the practitioners accredited by the association would apply their knowledge professionally. The absence of accountability led practitioners to devise their own definition to Forest School or argue over what were the right practices with other practitioners. These arguments, according to Practitioner A, were obvious on social media. This could be the result of the increasing popularity of the concept and the consequent existence of multiple agencies claiming to train interested individuals as practitioners.

Being a practitioner

All the practitioner participants appreciated a network of practitioners either real (through their training organisations) or virtual for more ideas and support. Facebook has at least three different Forest School groups. Members of certain groups claim that certain other groups are political in nature, some opposed discussion over FSA's failure (as mentioned in a comment on Facebook) or certain Forest School practices but most wanted to share experiences with others. They referred to themselves as support groups for practitioners. Some members also complained about group administrators being stern regarding what is was allowed on their groups. This to me appears to be a massive issue in which the Forest School can be used as an effective tool in learning. If practitioners do not share ideas, support each other positively and share a rapport amongst themselves then the network as a whole might find it difficult to serve the purpose of meeting the goals of Forest School. On the other hand, I have also come across various positive and productive discussions on activities and ideas amongst practitioners on Facebook groups.

Practitioners looking forward to new activities, apart from any form of networking with fellow practitioners, depend on the internet for ideas on improved sessions. The Facebook groups play an important role in the sharing of ideas between practitioners across the country. Similarly, the kind of activities that should be allowed at sessions

are disputed as well. For instance, on a Facebook group, I read disagreements around using chalk on tree barks as a mode of expression for children. Some practitioners were vehemently against it as they claimed that the chalk could impact the trees. On the other hand, some supported the activity as a creative form of expression.

Most practitioners seem to be worried about the risk assessments that needed to be carried out about the woodland and the activities, and the insurance to cover them in case of any accidents during sessions. Practitioner E, as a Level 3 certification trainer, also confirmed that trainees are frequently worried about risk assessments. Additionally, not all schools ask for a risk assessment and if they do, then either the standard procedure provided by the school or the procedure available by the Health and Safety Executive is used. According the Facebook group discussions, the Health and Safety committee or the trustees of the organisation could contribute to the procedure as well. In most cases, the trainers approve the risk assessment of the trainees during the Level 3 qualification process. The risk assessments are either reviewed annually or after an incident.

Even though practitioners find their job challenging at times; for example, negotiations with parents, schools; most of them agreed that their job made them happy. Practitioner A claimed that the excitement that children exhibit out in nature and their growth, in addition to that of the adults who volunteer, made her job worthwhile. Similarly, Practitioner C emphasised on the freedom that children have at Forest School to express themselves. She took the opportunity to share her experience at a ‘main-stream school’. According to Practitioner C, children at the school were stressed and some were crying during the examination period. The practitioner claimed that this was due to the fear of being marked. Therefore, the practitioner appreciated the level of autonomy that they and the children had in terms of learning at Forest School. On the other hand, Practitioner B spoke about their joy of self-development in addition to watching children learn and grow. An example was them getting over the phobia of spiders by learning to ‘get around it’.

Although Forest School concept clearly states that one woodland is used throughout the year to contribute to the learning of the children, Practitioner D believes that practitioners should consider changing the woodland. That could add to the learning

experience of the children, as different environments would get children to learn to engage with them differently.

Place for Forest School

On most occasions, practitioners who work with schools encounter an initial opposition or reluctance from some parents who perceive Forest School as free play time. Such parents are dissatisfied with the introduction of Forest School by the school and see it as a waste of time. As Practitioner E mentioned, parents mostly say 'it's all right to play, but how do they (*children*) learn to read and write?' The practitioners overcome this by talking to the parents, handing out informational leaflets and simply giving them time to understand the importance of outdoor learning. When the children talk about their activities at home and share their learning enthusiastically, parents eventually understand that their children appreciate Forest School and truly are involved in activities rather than just free play. Yet, there are parents who unwaveringly refuse to support Forest School as an essential part of learning. In such cases, parents are allowed to express their dissatisfaction while the sessions are being carried out as per the original plan.

Practitioners also perceive the importance of parent volunteers differently. Although Practitioner A appreciated parent volunteers at her sessions and perceived it as a good opportunity to promote Forest School amongst parents, Practitioner B preferred no parents at her sessions. According to her, parents usually opt to come to the sessions to ensure their children's safety rather than to assist the practitioner. This applies to parents who do not engage in the outdoors themselves and perceive it to be dangerous or full of risks. It appears that having parents as volunteers is a personal choice for practitioners. In my observation of Group A, I met the same parent volunteers twice. I observed that the children whose mothers were at the session were more distracted and tended to run to their mothers with their problems, disputes or activities. For example, Child B rushed to Parent B to show the medallion he had made at the session. Similarly, Child C chose to go to his mother to share his concerns regarding one of his peers. In both of these instances, the practitioner's presence was overpowered by the parents' presence.

Open to change

Practitioner E suggested that practitioners themselves should be open to change and face their own fears. According to her, if practitioners hold themselves back from certain experiences, for instance fear of spiders or mice, then children are restricted from certain experiences themselves. I found this suggestion rather interesting as presumably educators open up the possibilities for their learners and in the case of outdoor learning where there are more potential dangers and risk assessments involved, educators, or in this particular case practitioners, lead by example. On that basis Practitioner E also suggested that handling of insects and animals (non-dangerous) in Forest School sessions could inform students that natural fauna does not harm us and could be saved when in need. For instance, when it came to handling wasps, Practitioner E gave an example of her rescuing a wasp from a puddle of water while fellow teachers were scared to go near the struggling wasp. As children witnessed this, Practitioner E wanted them to take the message home that plants and insects are not around us to harm us but to survive.

This is a key discussion because this particular practitioner is a trainee and has a background of working in an animal farm/ shelter. Her previous employment involved walking children in the farm and talking about animals. It appears that she is combining her previous experience with her current potential profession and suggesting new ideas. In other words, the participant is falling back on her experiences and learning from new ones. This, as per my interpretation, is a positive approach which is giving rise to new ideas.

6.3.4. Theme 4: Forest School and Formal education

The final analytical category focuses on Forest School as a method of outdoor learning and its relationship with formal education at school based on the views of the participants of my study. The child participants were directly asked whether attending Forest School sessions helped them with their schoolwork. This category also discusses the effect of outdoor learning on children as per the testimonials of the teacher, parent and practitioner participants. Lastly, my observations on environmental consciousness and conversations around nature have been presented here as well. This theme is divided into six analytical categories.

Learning about nature and plants

Most child participants suggested that attending Forest School helped in learning about nature and plants, which they are taught in school. During participatory observation, I had multiple conversations with the child participants regarding their interest in particular elements in the woodland. For instance, Child C referred to a commonly found grass as 'wheat plant'. When asked where she had learnt about wheat plants, she responded with 'in class'. Similarly, she also claimed that since coming to Forest School she has learnt how plants look below the soil. She has investigated uprooted plants in the woodland and noticed the roots and this was helpful while learning about plants at school.

My interpretation of parents' view on learning in Forest School and at school is mixed in nature. Some parents believe there was a transfer of knowledge between Forest School and school and others talked more about physical health and life skills. For example, Parent B, whose child went to the school-sponsored Forest School sessions, specifically mentioned that her child learns in Forest School what he does not learn at school, whereas Parent A stated that her child practically learns the theory he is taught in school.

For teachers, outdoor learning played an important role in learning and in the development of children. Teacher D claimed that since Forest School is more about grass, plants and trees, this could be used to learn Maths by counting leaves, branches and applying additions, placing values, and so on. Learning outside, according to Teacher C, can aid in investigation and in developing the reasoning skills needed in the classroom.

Many parent participants noticed an increased interest in their children in spending time outside the house, most importantly away from the television. Parent D claimed that her child preferred to spend more time in their garden and displayed specific interest in insects and plants. Parent G stated that her child had started to collect oddments from their family outdoor experiences; for instance, collecting stones and bringing them home from their beach holiday and leaves from their nature-walk. It

appears that the more time the child participants spend in the natural environment the more interested they are in the elements of the environment. Collecting leaves and pebbles and bringing them home appear to be a way of showing appreciation of nature, leading to the bringing back of souvenirs to remember those particular trips.

Creativity and imagination

Child A claimed that Forest School activities improve his creativity, which helps him in the Art class at school. One of the incidents that led me to think about fostering of imagination at Forest Schools was when Child D held the small, spherical insides of a plant and referred to them as ‘sticky spider heads’ (Figure 6.3). She said that she had not ever held spider heads but imagines they would be sticky like those pods she was holding.

Figure 6.3

Parent C claimed that outdoor learning promotes creativity and imagination in children, which can aid them in their writing skills, and he was looking forward to such interests in his children.

Similarly, as mentioned earlier, Group A consisted of a child who was extremely interested in finding ‘tree-fairies’ at the woodland. I was particularly intrigued by it and engaged further with her. According to my field-notes, the child claimed that one must build fairy tree houses to attract them. According to Practitioner A, this particular child liked to do her own activities and could even be found talking to herself at most times.

When she built a ‘goblin trap’, one of her peers called her ‘imaginative’. This is again a very good example of children being allowed to be themselves and follow their interests outside the classroom, leading to very interesting ideas and conversations amongst other children. I specifically noted the respect that the other children showed towards her and her own tasks, potentially learning to show respect and appreciation to those who might appear different from us.

Strengthening classrooms and home links

Most parents stated that their children talk about their Forest School activities at home. Parent E claimed that the class teacher of her child reported that the child referred to his after-school Forest School in class. Parent B and D separately spoke about their children taking the family for a weekend picnic to their Forest School woodland and reenacting the activities they performed during their sessions. Teacher C stated that the only way she learnt that Child F went to Forest School (after-school) was through the child, who constantly talked about her experiences in class. Child F is otherwise noted as a ‘quiet child’. The teacher commented after the interview, ‘You know a child is interested in something when she cannot stop talking about it’. Similarly, another example of increased liking towards Forest Schools by children are the Forest School themed birthday parties. Parent G arranged a Forest School birthday party for her child as the child had specifically requested for it. The parent also added that the child wished to share her Forest School experiences with her friends. Child G went to the after-school club. Practitioner B mentioned that the Forest School birthday party is becoming a trend and she organised them on a private basis over weekends when approached by parents.

Three out of four teachers claimed that the students who attended after-school Forest School sessions were the high achievers in their class. They were not sure about whether or not attending Forest School regularly facilitated their achievement in school; however, they did not deny the possibility either. More research in this field could prove to be very useful in understanding the full potential of Forest School and other similar outdoor learning techniques.

Teacher A claimed that the outdoor environment helps educators to perceive the child as a whole and helps children have a close look at the work of nature. Similarly, Parent

C claimed outdoor learning was a part of all-rounded education, especially in an urban area where children are restricted in their activities due to constant congestion.

Previous sessions

None of the child participants could recall in any detail what they had done in the previous Forest School sessions, except one incident where a child wished to make a bow just like he had in the previous session. However, they enjoyed coming to their sessions because they had fun and wanted to continue coming.

At one of the sessions with the Group A, a Roman-themed activity involved the children making medallions. They were provided with wood circles, appropriate chisels to carve out a small hole for the thread, roll of thread and colour pens. Child B made a medallion with varied colours (Figure 6.4). When asked to explain his choice of colours by the practitioner, he explained that the red represented fire, green represented a tornado, yellow represented a desert and dark blue and black represented lightning.

Figure 6.4

When asked where he had learnt this from, he could not recall. Potentially, this could be an example to illustrate that for children it may not be important where they gained a specific piece of information, but it does transpire in another form in another place. Forest School sessions could be an opportunity to express knowledge gathered elsewhere, such as television, comic books or the classroom.

Outdoor learning and formal education

Except Practitioner D, all the practitioners agreed that there is a transfer of knowledge between outdoor learning and formal education and Forest School is a mode for that transfer. Practitioner B stated that children also take back a lot of practical knowledge and skills to their classrooms. Practitioner D, on the other hand, believes that outdoor learning and formal education are two different aspects of learning styles which should not be confused for each other. My understanding of Practitioner D's views on Forest School, based on the interview and engagement, was that Forest School was sufficient as an experience for the children to learn and enjoy and does not have to be compared or connected with formal education. Parents mostly connected outdoor learning to Science. Parent C linked outdoor learning and formal education by stating that they are part of the same but larger knowledge spectrum. He claims that learning a little about everything and as much as the child can, is a good aspect of learning and the child has various experiences to draw upon. Parent D also mentioned the variety of experiences aiding children with varied opportunities to learn. This could be related to the state of children with different learning abilities and styles. Teacher D claimed that while pursuing her teacher training she was taught that outdoor learning is the best way forward. However, the rigid academic structure and time constraints make it difficult for her to innovate.

Although most parents and teachers were in favour of Forest School, the debate around whether it should be part of the formal school system led to some discussions. Practitioner A, B and E suggested that Forest School should become school curriculum oriented. Practitioner B believes that the UK should follow the Swedish and Danish early education system wherein young children spend time outdoors until the age of seven or eight. Furthermore, she supports the integration of the Forest School concept in the school curriculum so that children of all ages can spend more time and learn outdoors. According to Practitioner B, all that is taught in school can be taught outdoors, which is in line with Practitioner E to a certain degree. Practitioner E believes that outdoor learning similar to Forest School should be part of the school curriculum at least until Grade 6. Going back to Practitioner B and her belief that formal education can be replaced by outdoor learning, I will be discussing this further in Chapter 7 while focusing on the importance of formal education and the balance that could be created between formal education and outdoor learning to support an education programme

that could fulfill different academic needs, specifically, environmental education. Similarly, Practitioner A claims that a 12-week or even a whole year programme can make a big difference to the children. This will also help them observe the seasonal changes throughout the year. Currently Practitioner A provides a six-week programme in her school. Teacher A stated that outdoor learning encourages confidence, team-building, problem-solving and teamwork. All the teacher participants agreed that outdoor learning has positive impacts on the children. Parents A and B claimed it promotes the quality of leadership. Parent C spoke about 'toughening of children' by having spent time outdoors during rain and winter.

Protecting nature

Child B mentioned protecting trees before it being too late and having watched that on television. Most children related Forest School sessions to nature and trees. Child D talked about wanting to climb up a fallen tree and having a look at it. She also mentioned people cutting down trees as a negative action. Child F correlated Forest School to a place to learn about how not to harm the environment. My field notes contain an anecdote about a child approaching the practitioners distressed and informing her that he accidently 'broke a plant'. He then apologised for it. Another incident which intrigued me was when the group found a baby pigeon that had fallen from its nest. After a debate about what the appropriate step should be, the practitioners declared that the pigeon should be left where it is. Hearing that, two children decided to stay with the pigeon to protect it from getting hurt. They had to then be convinced by the practitioner to join the group. Another example would be a group of children making a small tepee with sticks for insects (Figure 6.5). They also made a shelter with a leaf for protection from the rain and left some food for the insects to eat.

Figure 6.5

Environment consciousness by spending considerable and regular time in nature is one of my key and personally important research questions. My observation and interaction with child participants state that many of the participants were aware of certain current environmental issues, for instance, chopping of trees and harming the environment. Appearing concerned about a baby pigeon and a 'broken plant' were examples of certain degree of consciousness that were exhibited in the field area. This again is an example of education *in* the environment*, for* the environment even though none of the activities were designed to do so. This brings the question around introduction of education *for* the environment as part of Forest School practices.

A lot of the discussion also pointed at the information gathered through television. This might also indicate that children learn from various sources. Being provided with more exposure to nature and its elements could help them think about environmentally-sensitive behaviour. The key point here is that Forest School does not talk about sustainability or global warming yet. As part of the Facebook discussion, I observed that practitioners are not sure about including environmental messages in their sessions. One of the practitioners mentioned the current political and scientific arguments against climate change and hence was not sure whether to discuss it with

the children. This does question the possibility of environmental education through Forest School if practitioners themselves are unsure of the current status of the natural environment.

6.4. Summary of the chapter

The chapter presents an analysis of the data generated through various tools as part of my case study. Data was generated by observing and interviewing children, parents, teachers and Forest School practitioners. The raw data was then transformed with the help of NVivo, a software that helps with coding qualitative data. After highlighting the common and most frequent data items as codes, these were categorised into eight and then four analytical themes.

These themes represent my processed data. *Forest School as a concept* develops the meaning of Forest School from my participants' point of view. *Forest Schools in practice* discusses how the concept has been implemented in my case study settings. *Forest School practitioners* is a theme that contains some unexpected aspects of Forest School, aspects that I had not planned to capture, such as the discussion surrounding child-led and child-initiated, and the aspect of practitioners being trained by different agencies. As I begin to discuss the difficulties and challenges that the practitioners face, and perhaps the divergent perceptions among practitioners as to what constitutes good practice under Forest School's ethos, I also focus on their personal journeys and the satisfaction they get from doing their job. Finally, *Forest School and Formal education* discusses the data pertaining to the link between outdoor learning and education (formal and other forms). From my data (which I have acknowledged is limited in scope and range), I believe it has been possible to detect an element of potential environment consciousness in children through frequent or regular exposure to their natural surroundings and that this may provide positive feedback into the child's experience of the formal school curriculum. In the next chapter I open up and discuss this possibility in more detail, specifically, with reference to my experience in India as an Environmental Science and climate change educator.

Chapter Seven: Discussion of the data

7.1. Introduction

This research has aimed to explore the relationship between outdoor and classroom learning, with a special focus on environmental consciousness that can potentially come with frequent contact with nature. With Forest School as the multi-site case study, the research looks at a particular kind of outdoor experience which is repeated, timed, self-led and above all in the same wooded surroundings throughout the year. Data collected through participatory observation, photographs and interviews have helped me explore and to some extent answer my research questions, although it has been noted that this study is on a very small scale and time frame. The limitations make this research, in effect, a pilot study for further investigation on a larger scale and time frame in various settings, especially in a country like India (my origin) where outdoor learning is not yet part of formal education or extracurricular activities, apart from sports.

In this chapter I discuss my findings more broadly with particular emphasis on the meaning and educational potential of Forest School. Section 7.4 proposes the integrated pedagogy approaches by Wood (2010), which can potentially aid in bringing formal and informal learning together. In section 7.5, I have discussed the potential of Forest School in environmental education and concluded the chapter with the contribution made by my research in the field of environmental education (section 7.6).

7.2. Forest School as an educational ideal

In Chapter 2, I discussed ‘experiential learning’, which I have shown is concomitant with a concept like Forest School where allowing children to spend time in a woodland following their own instincts is considered a process of learning. According to my data, learning at Forest School is largely child-led with adult planning and supervision. Even

though Knight (2009) mentions that Forest School is also child-initiated, none of the practitioners that I engaged with mentioned this aspect of Forest School, except for Practitioner E. Practitioners who work in schools plan a session along the lines of the school curriculum. However, when working in after-school clubs, the sessions are planned arbitrarily. In both these cases, I observed that the children have the liberty to choose their own activities or games throughout the sessions. The continuous interaction with the same environment leads to continuity of experiences and interactions between the objective and internal conditions of the learners, thereby supporting Dewey's account of education through experiences. Child participants referring to local weed as wheat, crushing berries to obtain the red dye, comparing the insides of a pod to a spider's head appeared as good examples of combining experiences to form concepts and then going back to those concepts with more experiences. Additionally, child participants often built dens, made rafts and played with bows and arrows. This led me to think that the repetition of such activities aided participants to be more creative and skillful with every attempt, as action comes before knowledge (Piaget, 1972). One such example was the medallion made by a child participant on the basis of natural elements such as water and fire. The child participant did not recall the source of his knowledge but nevertheless drew from it and applied it during the Forest School session. Piaget's claim that theory informs practice can be applied in this case. It may not matter to children where and how they learn but when provided with an opportunity, they express their ideas. With the age group of child participants being between 5 and 11, both representational and concrete operations stage of child learning are applicable, which means that these participants reflect and internalise their actions and then convert them into images: for example, using berries for red dye. Some of them are also capable of abstract symbolism and forming logical relations; for example, building a tepee for insects to provide shelter from rain and providing food to keep hunger away. Another example would be a child questioning the Forest School rules. The fact that all child participants understood that the rules made them safe in the woodland made it clear to me that they understood the logic behind safe behaviour. However, one child participant wanted the rule on dogs to be relaxed; it is possible that her experience with dogs has been mostly pleasant and that she likes dogs and hence desires opportunities to have those pleasant experiences at the Forest School sessions as well.

If Forest School is to be considered a valuable form of outdoor learning, it must have a positive impact on the learning of the children as through discovery and playing they learn to manage their own learning (Watts, 2013). This is much like Dewey's claim of learning to learn through experiences. By directly being involved with natural elements like sand, water and stones, children involve themselves in the experiences that they create. This connection, according to Watts (2013), is instinctive as a primeval need to be connected with nature. 'Children will make direct connections with the natural environment as they find small creatures, observe leaves changing colour, and plant and grow their own crops. They will acquire new knowledge and use this to inform decision-making' (Watts, 2013, p. 10). Watts also suggests that active learning should be supported through sensitive intervention to extend and deepen learning. Adults play an important role here to promote creativity, imagination and a deeper level of playing through activities and resources to enhance learning for older children. It is perhaps significant that these adults most likely appreciate and enjoy being outdoors themselves (Watts, 2013). For example, those parent participants who mentioned enjoying being outdoors, also wished for their children to be the same. In 1980, Tanner suggested that youthful experiences of the outdoors and relatively pristine environments emerge as a dominant lifelong influence in people. All of these scholars and researchers support the idea of outdoor learning facilitating education as a whole and both physical and mental development. The Forest School case study, representing outdoor learning in my research, tends to support such claims. However, it is important to open up wider perspectives, such as that of Leather's arguments that question the relevance of Forest School to the British culture and practices. I further discuss the skeptical view presented in chapter 4.

7.3. Forest School: Pragmatic understanding

Based on my observation, Forest School provides children freedom to explore and spend time in the designated woodland. The risks are ~~a~~ssessed with safety sweeps in the area and safety rules for children. I have not directly observed the Scandinavian concept of outdoor learning and therefore am unable to make a justified comparison. According to the teachers and parents I interviewed, there was simple but profound

appreciation of the opportunity the children received to spend time in nature. Especially living in a city and not having easy access to open space and woodland, Forest School provided an antidote for children who would potentially tend to spend time watching television and playing video games. Child participants from the research appreciated Forest School for the free time they got to express themselves through activities, either designed by the practitioners or on their own out in the open.

However, the educational aspect of the Forest School concept, as it has been adopted and adapted for the UK context can (and in my opinion should) be challenged to ensure that it fulfills the declared objectives. For example, one of the objectives is to develop confidence and self-esteem[37]. In that aspect, all the assessment that is conducted to evaluate the progress and experiences that the children have during the sessions are mostly observational. The interactions that the practitioners have with the children and their observations during the sessions may or may not be forwarded to the school and parents. There is no specific format and process for such potential dialogue between Forest School and parents. Agreed that the objectives are intangible and hence will require more work than usual to assess. However, it would behoove the practitioners to provide tangible results in order to convince the education system and parents to invest in the Forest School programme. Practitioners who work with schools and design curriculum specific activities can take pictures of the children while they perform the activities and their creations for review if required. As far as the change in behaviour of the children is concerned, the assessment is purely observational again. For example, one child who was reported to have had an adversarial relationship with his peers initially was given the role of the team leader by the practitioner. This, according to the practitioner, made the child concentrate on the tasks in hand rather than comparisons with his peers. This particular child also enjoyed the appreciation from peers and the practitioner at the end of sessions, which in turn helped him to calm down and respect his peers. Apart from the narrative of the practitioner there is no recorded evidence to substantiate the above. Having said that, I recognise that it could be very difficult to assess such attributes beyond regular recordings of the events, and to do so may well add a layer of bureaucracy or regulation that would have negative impact on the Forest School ideal.

[37] https://www.forestschoolassociation.org/what-is-forest-school/

Additionally, many parents have also appeared to be unhappy with Forest School being introduced in the school. The problem, deemed to be one of perception, was tackled by the practitioners with newsletters and information pamphlets to communicate information about Forest School. According to the practitioners, parents were eventually convinced once children talked about their sessions at home. Seemingly, parents were convinced that the children indulged in constructive activities at Forest School and enjoyed the sessions very much.

In that aspect, schools who offer a Forest School programme have the programme as part of the curriculum and therefore, teachers work with the practitioners to implement it. Thus, teachers keep the practitioners informed about topics that are being covered in class and the practitioners design activities based on the topic like Romans and archeologists. There is an attempt to *connect* outdoor education, which involves activities such as building dens, making wooden medallions and constructing an obstacle course, to identifiable aspects of school curriculum. This could also play an important role in persuading the schools to accept and fund the programme as part of the school curriculum and to convince sceptical parents. On the other hand, detailed auditing of curriculum contents can be taken too far: after all, after-school clubs may focus more on the experience and attributes of outdoor education such as leadership, confidence and teamwork through play. Activities such as bow and raft making are scattered across the term, and do not have to have formal curriculum links to be justified: children are simply offered quality playtime which they seem to appreciate a lot, potentially because they come straight from school and it is a different setting.

Based on my data there is quite an array of training institutes to earn the Level 3 certificate to be practitioners, for example, Forest School Association, Archimedes, Forest Education Initiatives and Bridgewater College. According to the data collected through practitioners who had all been trained by different organisations, it appears that Forest School as a concept has become a product being sold as an experience that children ‘must have’. Although the basic idea of spending time in a woodland and indulging in outdoor activities remains the same, the training and understanding of the concept seem to be different with the lack of clear criteria and process for training. Based on my interviews and research, most often, practitioners come from different backgrounds, both academically and professionally, with a view of change in career.

Therefore, they may not be familiar with the process of teaching and learning. Additionally, Forest School is a particular kind of experience provided to young children with a view of personal and social development. Thus far, I have not come across a set training process which takes all of these aspects into consideration. Moreover, although the concept speaks the language of Dewey (experiential learning), most practitioners seemed unaware of the scholar and his work. This became more evident with a particular practitioner participant, who is also a Level 3 trainer, who claimed that different practitioners are trained differently based on their trainers. In fact, based on different trainers even the understanding of the concept of Forest School might differ. According to this argument, it appears that having a basic set of standards for Level 3 qualification could be a key tool to ensure that the concept of Forest School as it is to be understood is maintained. The practitioners across the country might use different methods and activities to engage children in their woodland, while the fundamental philosophy, training and goals remain the same. However, standardising the training could also further fuel the commodification of Forest School. This tension between freedom and regulation needs to be resolved for the Forest School experience to achieve its objectives across the band of practitioners.

As mentioned above, Forest School is promoted and certified by different organisations, wherein, for some organisations Forest School appears to be set of outdoor activities such as climbing and river rafting by the different agencies claiming to be providing a wholesome and learning experience. For example, organisations training practitioners might claim to increase self-esteem and confidence in children, however with no training in possible assessment of such intangible human characteristics. Especially when the wider conversation concerning outdoor learning and its links to formal education includes assertions to promote sustainable development – Ampuero, Miranda, Delgado, Goyen, and Weaver (2015); Fleming and Dawson (2013) – it might be prudent for concepts such as Forest School to be based on concrete training and assessment techniques.

7.4. Forest School and the school curriculum

With respect to incorporating outdoor learning into the formal school curriculum, the practitioners surveyed in this study (except one) supported the idea that classroom education can be brought into the open, and that children can be more engaged in the formal curriculum through outdoor activities. Interestingly, different practitioners had different perspectives on the extent to which formal education could be introduced outside the classroom. One of the practitioners specifically marked Year 6 as the threshold for taking the formal curriculum outdoors. Another practitioner claimed that all of formal curriculum could be taught outdoors. Such divergence in views is interesting given that there are a lot of discussions surrounding the significance of outdoor learning when compared to formal classroom learning by practitioners and scholars such as Ackerman (2003) and Chall (2000).

According to Young (1999), knowledge received in the classroom cannot be replaced by outdoor learning; for example, Physics and Chemistry; what Young calls *powerful knowledge* (2008). This form of knowledge recognises the relationship to a reality that is independent of us and has a purpose and structure. This knowledge is also different from our everyday experiences and therefore acquired through specific institutions such as schools and universities and therefore the closest to the reality of the world we live in. Similarly, to know a subject better one must specialise in it, which is not possible just being outdoors. This needs to be done in a specialised environment with specialised books, for example in a laboratory. It is important to note that Young does not disregard every day or commonsense knowledge. However, he emphasises that in order to achieve a specific goal in education or occupation or Science, specialised knowledge is important, for example, to treat HIV, or for STEM subjects, which are not dependent on cultural assumptions of a particular community.

If we follow Young's argument, therefore, the formal school curriculum cannot, *by definition*, be taught through playtime outdoors, because children are unlikely to encounter concepts like photosynthesis or the hydrological cycle through experience: they need to be taught. However, the possibility of engaging early year and primary children outdoors more, like Watts (2013) and Porter (2018) suggest, during the important years of social, cognitive and motor skills development could be useful for

them. Therefore, including outdoor learning, such as Forest School activity, in formal curriculum in the early and primary years could be both manageable and sensible. With respect to that, even Dewey suggested finding ways to combine the two 'philosophies', where the formal curriculum with its prescribed knowledge contents and progressive (experiential) learning methods of engaging children in play, discovery, and environmental experiences could provide young children with opportunities to learn language, science and mathematics in an open, self-initiated manner. In this context, Forest School could be a convenient and applicable model of outdoor learning in schools. This is because it involves one single green space that allows children to observe changes all throughout the year, and acts as a familiar space for the children and for the teachers to plan their course.

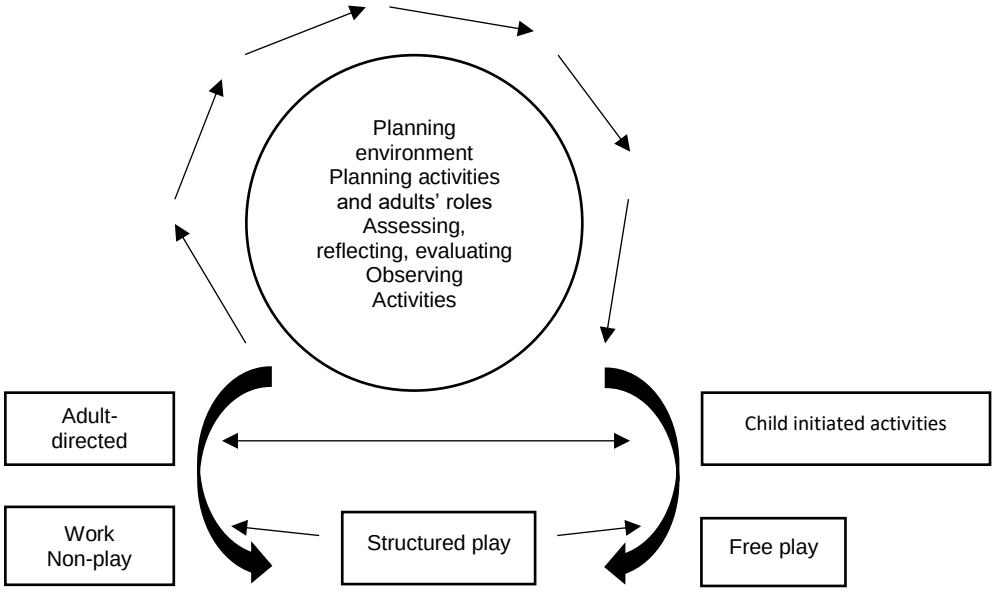
However, a child-led process to learning may not be ideal when combining school curriculum with Forest School, considering children choose to do what they want to do in these sessions. One of the practitioners who was interviewed suggested a key difference between 'child-led' and 'child-initiated'. He suggested that Forest School sessions are designed for certain activities and it is understandable if a group of children do not wish to join the activity and would like to play or build dens. Even so, such individuals should be gradually included in the intended learning activity, so that the session (or at least, a sequence of sessions over time) can fulfill certain learning objectives. The process was termed as child-initiated but practitioner-led. Children are free to do what they want to during the session; however, they need to be steered towards the session objectives – in Young's terms, to be drawn beyond their experiential encounters eventually. Children are curious by nature and it is up to the adults to use their curiosity to their educational advantage, and it goes almost without saying that this requires high levels of knowledge, skill and judgement on the part of the practitioner/teacher.

According to Broadhead (2004), understanding the techniques of learning and skills of children would allow adults to learn to integrate play in the classroom. For example, the restrictions seen in a traditional classroom are relaxed outside the classroom and therefore children have more freedom to express themselves. Broadhead claims that allowing this sense of freedom within the classroom walls with careful and limited interference by the teachers can lead to an appropriate learning environment for

children. This, however, will require careful planning. Hence, a cognisance of the socio-cultural aspects of play will explain that playing is not a mere representation of a child's imaginary world, but also her understanding of the complex world of which she is part and the people around her (both peers and the teacher in the classroom). Broadhead's view that playing is not merely innocent and juvenile but a depiction of their understanding of what they learn and experience, is fascinating and important. The aforementioned notion about play could change the way it is perceived and treated at home and in school. Therefore, if adults get involved in playtime as 'playmates' and interact with children, it would help them in planning for playtime with child-initiated activities (Wood, 2010). Therefore, the pedagogical decision-making and eventual curriculum planning at school is based on children's choices, intellectual capacity and most importantly, knowledge (Wood, 2010). Wood also suggests that the friction between the rhetoric and the reality of play is due to "the long-established ideological claims that have been made about the primacy of free play, free choice, autonomy, control and ownership, all of which are characteristics of children's self-initiated activities" (Wood, 2010, p. 3). To come to a conclusion Wood has suggested a model to balance play with teaching.

To conceptualise such a process, Wood (2010) has suggested a teaching model (Figure 7.1) that explains the amalgamation of an adult-led and child-initiated approach in both the indoor and outdoor environment and the curriculum. The pedagogy involves a cycle of planning the activities and learning environment, adults' roles during the activities, observing, reflecting, evaluating and eventually returning to further planning. A flow of information between child-initiated and adult-led activities is ensured where both have different but complementary characteristics. For example, in the child-initiated space children have the liberty to interact with any of their peers and adults around. There is unlimited freedom for creativity and imagination. However, in the adult-led activity space, children will have the choice to make decisions but limited in extent in the presence of curriculum-related contents.

Figure 7.1. A model of integrated pedagogy approaches (Wood, 2010, p.21)



This holistic model, which includes the children, adults and their goals in the pedagogy, could assist adults in understanding their role in children's world of play and imagination while at the same time contributing academically. Assessment, reflection, evaluation and re-working the plans will provide the space and opportunity for the adults to learn how to intervene and guide children towards the objectives of the activities during their play. Therefore, the emphasis here is on a positive relationship between adults and children to facilitate learning with reference to the indoor and outdoor environment and with the availability of appropriate resources (Leather, 2016). Wood's claim is pertinent to Forest School, as practitioners do involve themselves with the children in the activities, although according to my observation, less so in free play. Forest School sessions are said to be child-led and hence children get to lead the sessions and create their own structure for themselves. With practitioners designing activities that are as appealing to the children as possible (as described by the child participants: 'fun', being able 'to do anything', being 'happy') while at the same time encouraging them to spend time in and learn about nature ('learning about nature', `learning about plants'), Forest School potentially aims to strike a balance between playing and learning as suggested by Broadhead.

7.5. Environmental consciousness through Forest School

As discussed in Chapter 2, it is the need of the hour to educate children about and involve them in understanding their immediate environment and therefore the danger that various species of flora and fauna face. There is a need to create sensitivity and empathy in them with the hope that they will make ecological choices in the future. Most importantly, environmental education is my area of interest and passion. My observations and interviews of the children exhibited a certain degree of environmental consciousness, for example, feeling bad for harming a plant, wanting to take care of a baby pigeon, making a bug tepee with shelter from rain, talking about protecting trees. It was a lovely experience for me to watch children indulge in conversations on trees and insects of their own accord. There has been a contribution from other sources of information such as television, and that has been expressed at Forest School. These different sources of knowledge contribute to the understanding of current environmental issues, which is enhanced by the children's experience during Forest School sessions. According to Gray and Martin (2012), the three main outcomes of introducing outdoor education in the Australian national school curriculum would be to provide a personal contact with nature so as to promote enjoyment in nature, to enable the symbiotic relationship between humans and the natural environment, therefore to reflect back on unhealthy everyday life choices that affect sustainability, and to develop a sense of outdoor risk management, especially for urban children. This potentially will make children take positive actions to protect nature and take interest in events and discussions to promote environmental awareness.

Similarly, Leather (2016) suggests that regular outdoor learning through Forest School could foster the desire to spend more time outdoors as children grow older. The environmental learning space could cater to different learning needs of children and challenges the traditional modes of outdoor activities for specific age-groups, such as the Duke of Edinburgh Award scheme and traditional adventure sports. Most importantly, scholars like Tanner (1980) and Chawla (1998) have suggested that environmental experiences at an early age can have significant influence on sustainable decisions in the future and this research is a step towards establishing the connection between outdoor learning and environmental sensitivity. As the Tbilisi

Declaration (UNESCO, 1980, p. 17) emphasised environmental sensitivity (as an aspect of awareness) towards the learner's own community in the early years (Chawla, 1998), environment sensitivity can be one of the achievements in young children in addition to social, physical and mental well-being, through the integration of outdoor learning such as Forest school in primary education. As Chawla and Hart (1995) have argued, the foundation of environmental concerns is built infusing young children's own feelings with the sensations of the natural world, therefore gaining an understanding of the natural world as a living entity of which they are a part. Adults in their lives could reinforce this idea and help them build on it further through more experiences and information. "This interpretation of an *empathetic perspective* toward the environment primarily applies to early childhood or implies that an animistic relationship with the world, first felt in early childhood, remains people's initial entry into the sequence of variables that eventually lead to responsible environmental citizenship." (Chawla, 1998, p. 18). In this study, children appeared to be very aware of trees being cut and the importance of trees for their own survival. They seemed more curious about what trees were all about.

Parent participants have concurred that their children not only liked Forest School, but they also discussed what they did during sessions at home and even proposed to take the entire family for a picnic to the same spot. This could be evidence in favour of Forest School for not only proving to be appealing to the children, but also for promoting continual interaction with the outdoors. Similarly, teachers have also suggested that those children who went for the after-school club shared their Forest School experience with their peers in class. One very good example is the child who is usually quiet in class talks a lot about Forest School with her peers. These conversations included plants, trees and insects they come across while playing in the woodland.

7.6. My research and its contribution

This pilot research suggests that with a carefully planned curriculum, Forest School and formal education can be potentially combined together to provide children a

‘wholesome’ experience at school. By this, I mean a holistic experience providing them with specialised knowledge in the classroom in combination with outdoor activities that give children opportunities to understand practically knowledge acquired in school, wherever possible. This not only offers children a change of environment during their school hours, but also allows them physical activity, even if it is a walk in the natural environment. Additionally, there is a very high chance that spending time in nature frequently will give them a sense of the importance of nature itself. This research could be developed, importantly in a country like India where outdoor learning is not yet part of the school schedule and could provide a prospect for a concept like Forest School to develop. Principles of Forest School allow children to be outdoors irrespective of the weather and be themselves, jumping into puddles, rolling in the mud, etc. Apart from climbing trees, playing imaginative games (being fairies and catching dragons) enhances their experience of being in nature. Even though the sessions last for an hour, they appear to provide an essential, happy experience to take home.

As previously mentioned in the thesis, this research as a pilot study attempts to further contribute to the discussion around the place of outdoor learning in formal education. I have chosen a specific learning concept, Forest School. My main goal is to suggest an approach similar to Forest School in India and learn its contribution to environmental education. School students across the globe are demanding a proactive response from their governments on climate change. An informal concept such as Forest School provides children with an opportunity to be one with nature. My study has observed a very emotional relationship that emerged between young children and the environment they visited every other week. With examples of wanting to help plants and birds, it was evident that these children felt a sense of responsibility towards nature. This form of experience, in addition with other sources of information, will increase awareness among young people. It seems imperative that countries take climate change seriously and frame a solution to act upon. Change in the educational structure, in this case, could push young citizens to think about and work towards the environment even more productively. Outdoor learning as part of formal education could introduce a positive lifestyle change in children, in addition to encouraging an empathetic and caring approach to nature and its elements. I hope that through my pilot research, I can begin to build a relationship between outdoor learning with the

principles of Forest School and formal education with the view of promoting and sustaining environmental education.

Chapter Eight: Concluding the study

8.1. Introduction

In this final chapter I briefly reflect on some of the limitations of my study (section 8.2) but also conclude by addressing directly my research questions again (section 8.3). In a similar manner to Chapter 1, this chapter is important and personal to me. The answers to my research questions justify my thesis and therefore my MPhil degree and hopefully pave the path for further research in this field.

8.2 Limitations to my research

There are nearly always several limitations to consider when reporting a piece of empirical research, and this study is no exception. Practical research is always the 'art of the possible' to some extent and compromises need to be made – in this case notably in the methodology and analysis. These limitations have been mitigated in part via processing and handling data and yet acknowledgment must be made to them.

First, the recruited sample for the project was arguably small in comparison to other studies. Specifically, the interviewing of just eight child participants considerably impedes the generalisability of the gathered data. However, due to the real-world nature of conducting such a study, the inferences made are pertinent to the qualitative data gathered and presented as a case study. In addition to the small sample size, participants were recruited from arguably unequal groups: for instance, one group was observed within the school and the other two as part of an after-school club. In other words, the data generation was based upon an 'availability' or 'opportunity' sample and it is also important to note the limitations of adopting a thematic analysis approach, for example, researcher bias.

Yet, I hope I have made it clear, through the painstaking approach adopted through the transcribing of data for example, and the use of NVivo to properly group the initial

themes, that steps have been taken to take as much care as possible to accurately report the data. However, any future research in a different setting such as in India would be on a bigger scale and would consider more equal groups with a larger sample over a longer period of time.

Personally, I have understood the rigour that a research study demands. As an environmentalist, I struggled to curb my enthusiasm towards any environmentally positive expressions by my child participants. Similarly, in the field I was extremely interested in the activities and child participation. I had to frequently remind myself that I wasn't the facilitator or the educator there. As a researcher, I would do better as a passive observer in my next endeavour. My struggle with assimilation, analysis and interpretation of data has provided me with the confidence – and the knowledge and skills – to take this research forward to a higher level.

8.3. Conclusion

This thesis represents a long-term dream of conducting a research project on environmental education through outdoor learning. Even though I was unable to complete a PhD, I am glad to have conducted a 'pilot scale' study for an MPhil. In this section, I conclude my thesis by attempting to address all my research questions. This research was a case study of Forest School to investigate the relationship between outdoor and formal learning, focussing on environmental education. With multiple sources of evidence in order to achieve a more robust set of data directed at the same outcome through triangulation, the following sections will go through my research question and each of the sub questions.

Research question: *What relationship does Forest School as an outdoor learning tool have with formal education with regard to environmental education?*

The answer to this question weighs upon scholars such as Dewey, Young and Tanner. Connecting formal education and outdoor learning will require a great deal of planning and training on the part of the educators. My research provides some evidence to

indicate that teachers find outdoor learning more challenging than classroom based learning and difficult to plan. In order for Forest School to support environmental education, the sessions ought to be regular, accessible and scheduled. Educators must be equipped with knowledge, resources and most importantly, confidence. Children gain the specialised knowledge inside the classroom or laboratory, but they learn practically and experientially outside the classroom. Outdoor interaction could potentially allow a free exchange of ideas and doubts between peers and adults, as observed in Forest School sessions.

One of the key concerns emerging in my study is the ideologies of the teachers. Teachers agreed to not having a sufficient understanding of the benefits to exploring nature and being imaginative. This could be made possible by taking formal knowledge such as photosynthesis, outside the classroom. Apart from inculcating environmental consciousness, regular contact with the natural environment as part of individual and group activities can also lead to the cognitive development of the children. Hence, the relationship between outdoor learning in the form of Forest School and formal education is symbiotic in nature.

Sub question 1: *What associations between outdoor learning and formal education are recognised by school teachers and Forest School practitioners?*

The majority of participants and practitioners of this research recognised a positive and mutual relation between outdoor learning and formal education. However, there seemed to be a lack of clarity around how. Even though the child participants belonged to the age group of 5-8 years, most of the children recognised a link between Arts and Science with Forest School. Teachers vehemently supported outdoor learning in formal education but were inclined to traditional classroom learning with respect to time and funding constraints. Parent participants conflicted in their views. Some regarded Forest School as a part of school curriculum and others separated the experience from formal education but acknowledged it as a learning platform nonetheless. Practitioners, on the other hand, were completely in support of linking Forest School with formal education, barring one. However, they appeared to be

overstating the extent to which Forest School could compensate for formal education, rather than speaking of a synergy between the two forms of learning.

Sub question 2: *Does Forest School facilitate environment sensitivity according to children and parents?*

This research supports outdoor learning as a potential vehicle to environment sensitivity. Thinking, wondering and connecting with the natural environment can be attained through letting children spend time outdoors regularly. Therefore, intermittent exposure may not yield the desired result. There needs to be consistency to learning outside through a set, well-planned programme. As per the observation and interviews with the child participants, children showed a deeper understanding of trees being cut and destruction of natural habitats. Though the contribution made by other sources of information has not been denied in this research, regular contact with nature through Forest School seem like an opportunity to engage with nature and have direct experiences. Parent participants have mentioned increased curiosity towards plants, trees, wildlife and other natural elements, such as shells, leaves and rocks. Although there is no evidence of purposeful environmental education conducted through Forest School, it is a great tool to do so.

Sub question 3: *How can Forest School be included in formal education according to teachers and Forest School practitioners?*

The literature review and the limited data collected during this study state that there is potential environmental literacy through Forest School, especially when children are armed with formal education and other sources of information. They tend to see, feel and experience nature on a regular basis and connect the information gained passively through their active engagement with natural elements. The practitioners are well aware of local flora and fauna and are therefore in a position to educate children further and satisfy their queries. As a concept Forest School is distinct in terms of space, time and methodology (same woodland, regularly over period of a time and child-led/child-initiated), as opposed to outdoor learning in general, a field study which

is aim-based or adventure sports which are more from the point of view of recreation. On the other hand, formal education is rigid, time-sensitive, aim-based, adult-led and set within an indoor environment. Forest School could be placed between the two forms of learning. It is a programme which is more flexible than formal education but has set principles when compared to a regular outdoor activity.

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Appendices

Appendix 1: Information and Permission letter (sample)

Information sheet for Parents

Dear Parent, Date:

My name is Suguna Nair and I am an international research student at University College London, Institute of Education in London. My supervisor is Professor David Lambert in the department of Curriculum, Pedagogy and Assessment.

The broad focus of my study is to explore the relationship between and formal and informal learning. I have chosen “Forest School” (FS) as my case study. This study aims at exploring the learning outcomes of outdoor learning using Forest School methods and its links to the aims of the formal school curriculum.

The methods of gathering data for this research include observations during Forest School sessions and interviews from May – June 2017. Those interviewed will include the FS practitioner, class teacher, several students and their parents. Taking part in this study is completely voluntary and will be carried out according to the Ethical Guidelines of the British Educational Research Association (BERA). The interviews with the students are expected to last for 15-20 minutes each and will focus mainly on the students’ perspectives on Forest School sessions. Students can opt-out of the study at any point during the process. The interview questions have been attached to this letter of consent for your information.

The purpose behind observing and interviewing students is for me to better comprehend what students think about Forest School sessions and what they feel they have learned. All interactions will be conducted in a friendly manner, and will be non-threatening. I will select up to four students on the basis of my observation of the Forest School sessions: students who appear to respond to the sessions in different ways.

If your child is chosen for the interview, then I would appreciate a meeting with you as well. I will have some questions for you regarding your observations and perception about Forest School. This meeting will take up to 20-25 minutes.

All information collected during the research will be kept strictly confidential and any information relating to your child and you will be anonymised in the analysis and any documents, including the final write up of the thesis. I will be sharing the findings of the study with you and the thesis itself will be shared with the school.

If you agree for your child to participate in the study, I will be delighted to discuss it further and answer any questions you may have.

Yours faithfully,
Suguna Nair

Approved by the UCL Research Ethics Committee

PARENTAL CONSENT FORM

To be completed by a parent or guardian who AGREES to their child taking part in the research study on 'An exploration of the relationship between formal and informal learning: a case study of Forest School'.

Name of Researcher: Suguna Nair

1. I confirm that I have read you agreed and understood the information sheet dated ..... for the above mentioned study and have had the opportunity to ask questions.

Please tick the boxes if ☐

2. I consent for my child to take part in the above study. ☐

Please use BLOCK CAPITALS

Your Name ……

Child's full name ……..

Child's school ……

……

Signature of Parent/Guardian Date of signature

Appendix 2: Interview Transcription (4 samples)

Session with Practitioner A

What is your name?
[redacted]
School
[redacted] Primary School
Which Year students do you work with?
Year 3
Number of students?
One of group 15 and there are two such groups
Name of the woodland
It's [redacted]
Number of sessions you take per term?
6 sessions
How long have been an FS practioners?
For 18 months
How long does it a session generally take?
Two and quarter hours to and back from the woods.
Just going back to the previous question, what sort of training did you have to have to become an FS practitioner?
I did the FS level 3 practitioner training. There are different level and this level 3
And did you have had a specific qualification other than this training?
I think we need to have paediatric outdoor first aid qualification and a prerequisite to become a FS leader is either to have youth work working with children, teacher working with children, in the past or I am thinking working in the woodlands so one of the two really.
So how long do you prepare for a session?
I think it takes, well mentally it probably will take about up to an hour preparing for a session you know writing around it but before that you might be doing quite a lot of research just looking at other ideas online, gathering materials, checking the weather you what a lot depends on the weather and looking at what happened in the session beforehand.
So what factors influence the topic that you would consider for a session?
The overall the 6 sessions that we ran was ran over 12-week period because it was run every other week. They were looking at trying to the aim was to kind of link to their curriculum which was Roman at the time. So we were trying to do Roman related activities but also because they have been doing FS for the previous 3 years before that it was about trying to reacquaint them with the words to develop their fine and gross motor skills, also to connect with each other because that specific group had been having problems socially within the classroom.
So who informed you that the group had problems?
Nobody informed that the group dynamics themselves wasn't working that well, but after there was the first session that did not go down so well from that point on we were looking into create a better group dynamic really.
So then you have sessions or start designing sessions that are different?
I think so. The session that you came to was looking at them trying working together as a team where they device games together as a team and they played them as a

larger team so it was very much looking at them working together to device them and work their way through to create them really.
So say there is a group and they are not working together. You can notice that there is some problem. Do you have the authority and the independence to talk to them and discuss it with the class teacher in anyway?
I think absolutely. The school is very open to your feedback and after every individual session the teacher would check in with you. After every session you would check with the people who are working with you, the volunteers and the TAs supporting the group. So there is a lot of discussion that we have. It's not just down to me. It's about everyone feeding back really.
Do you measure the outcomes in any manner after sessions or after the end of the term?
Not at the end of the term. We do not get any feedbacks from the children as such. In the past I have done feedback from them but end of each session it is very informal asking them what they liked about the session and what they got out of it. But it is about receiving feedback from the parents. On that particular programme we have received all of feedback from the parents who have rather said it to my face or said it to other people how they have been finding it. Also the class teacher feeding back to the TA. Again it is very informal we do not get anyone to fill out any forms.
Do you have to complete any report at the end and submit it to the school or to the FSA, anyone for that matter.
Yes! Because I was running it with other FS leader who also running it for year 3 but for other class at the end of the six sessions we right kind of a summative report because we kind of run along the same time, same kind of activities. We might have different outcomes but it was the same activity delivery. So we write about what we did, who attend, what feedback they gave and what are feedback is and may be what follow up session we will do based on that.
Do you have anything to do with FSA? Like go back to them?
No there is absolutely no accountability to FSA with what we do which is a slight shame really. But there is no quality assurance or they do not check us on anything.
So what do you think? How receptive are the children to FS?
That particular group?
Ya
In general, I think the children were very receptive to it they seem to all take part in all the activities that we put forward. It is very much based on the individual choice if they really don't want to do the activities we don't make them. The final one was the most prescriptive I think. I wanted everyone to go away physically with the medal and we wanted everyone to take part in the kind of the game that they, Gladiator kind of training game. That's the most prescriptive all the ones that we have done. In general, because they don't have to take part in everything I think that's why they are engaged. What we have found in the past is that some will say yes straight away then others will come a bit further on and some might not. But they all seemed to have enjoyed it every session.
And that's been your general perception that the children generally in your experience so far is same?
I have never had a child not like it. What I have found is, not that group because that group had been doing it for 3 years, but you might have children who first couple of sessions at least less engaging because they are unsure about the surrounding. So it's all about fitting them in, making them feel more comfortable in their surroundings as opposed to the actual activities. Literally from week one we have children saying 'I

love it. I want to come back again' and I think it's because they have so much freedom there and it is also exciting and new and that's why they like it.
How receptive are the parents? Please do tell me about how often do you have parents volunteering? Are they open to it?
Yes. We have one or two volunteers the whole six weeks' programme. I think it was about six or seven different parents. That was quite a lot of uptake. I think it is a big commitment because we are asking them to be form 9 until 12.30, so that really a whole morning for them to take out. So we found that it was mainly mums and dads that are stay-at home that are able to do that. From the outset they were very supportive of it. The feedbacks they were getting via emails and via each other was positive. I think they enjoyed their doing it more than the time they have to support it really.
And in general you have had parents always supportive always?
No no no. last year we had complete nightmare. We ran same session as a pilot last year and it was my son's class and my son had just joined the school and we thought it was a very nice thing to offer. And there were quite a few vocal parents who were really dint think it was a good idea. They could see why children would want to do it, what they were getting out of it and how education was in supporting them. I spent quite a lot of time sending links to different bits of research and the school reinforced them why they were supporting it so it quite challenging for that group.
So did you manage to steer the parents towards you?
I am not sure. I am not sure that the ones that had decided they wanted their child doing more rigorous learning in the classroom. Those parents didn't come out and take part in it. And I think in Reception, Year 1 and 2 the children are just left you know an hour and quarter in the woods. They would walk there, they would play and then come home, is obviously a more normal form of FS. But the teachers did not take anything with them. There wouldn't be tasks or anything. I would always have ropes and a few things to engage the children with. Or I think they just going out to play and it was a free break and it was for a longer period of time. So I think those who came out were more connected and just getting the feedback from the children how much they preferred it because they were engaged in things it worked for them really.
So did you feel that even though the parents weren't not that keen, but the children were more interested?
There wasn't a single child who did not enjoy it. Children said that they liked it so much more and they did like it more.
So the children enjoyed it but the parents weren't happy?
Yes.
I don't know what they liked more. I always have a lose structure anyway at the starting and the ending and a couple.
So by the time you ended the term did you complete it with all the e=kids who started?
Yes.
And by the end of it did you see any changes in any of the parents who were opposed to FS in the first place?
No. I didn't do any feedbacks from them. It was too close to home because it was my son's class. It was his peer group so I tried to stay away as much as possible.
So did they complain to you or to the school?

(hesitates and laughs) I think …. I think little bit to the school and little bit via email and emails I wasn't part of and it was other parents who said 'oh they are kicking up a bit of a fuss". I don't think they were trying to deliberately …but there was one parent who gave a phone call who was like Governor as well who shared her views on it.
Did those kids carry on with FS later year?
No
So they voluntarily opted out?
No no. it's not offered in that year unfortunately.
Which year is that now?
They are in year 4 now.
Okay so, how many do they have?
They have Reception, Year 1 and 2 every other week. And then year 3 just the six-week period. So the school would like to have it throughout but it is more scheduling it and the payment of it really.
And what about the school?
I think they have been very receptive because this year they have paid us, last year they didn't. They found the funds for it and promoting it on FB so in that way there is a FB page.
So if they have funding, they would let the programme go on?
They say that. Yes.
So if you don't get enough volunteer, say parent volunteers, how do you manage then?
Well I think we only needed one. We only needed one TA. Initially they were just going to send us out with parent volunteers and then they realised well actually they need to send the TA. SO I think because of the numbers I think it's we can go out just the two of us really. But the parents are a help really.
If you don't have parents, you would be just fine with TAs?
I think so. I think I have a got a feeling that the ratio is 1 to 8 so I think that is completely fine.
What are your views on FS being child-led? When you plan something and a group of children decide to do something else, how do you manage that?
I think it is up to them. If they want to spend six weeks building a dam or creating their own little games, I don't have a problem with that. And I have found the school not got problems either.
So so you always a find a group of children not wanting to do what you have planned?
Ya. With …both those groups the core of those there were 2 or 3 wanted to do their own thing and they were happy to do their own thing.
Do you find your work satisfying?
Absolutely. Very satisfying. How can it not be? It's wonderful to see the change in children, it's wonderful to see them embrace nature as they do. And you know the excitement that comes with it. I live it. I actually the adults that work with me as well. From teachers you don't think oh the kind of you know…the volunteers don't think they will get involved. It nice to see them get involved.
So when you say it is nice to see the change in children, do you have any example?
Absolutely. So I mean in every group quite often you might find that they might be sticking quite close to their friends and do what their friends want them to do and you know second session they might try something and by the third session they chose to give it a go and their friends might come along and that quite nice you see. Where

they are taking initiative where they might not be natural leaders becoming natural leaders and it was really great in the particular group you came to see where one child was very challenging child and the rest of the group used to spend a lot of time ostracising him. But they realised he quite a lot of strength in him and he is quite good to help in activities and so he became the helper and really enjoyed being that helper. To me to see his position change in the class is really good.
So how many groups have you worked with so far in the past 18 months?
It's been quite a roll. That school that worked with two groups of 15, in other school every half term, it was two groups. So I worked 12 different groups and now I am working with year 2s and year 6s so over the year I have been working 18 different groups.
If given a chance what would change in the current FS arrangements in schools?
The contract I am in with the other school is every 6 weeks. What I like is that they have a model where every child gets a chance to do it and I think every child should do it. Whereas other schools have the model that only specific children do it. And I have the difficulty. I like six weeks but 12-week programme or a whole year programme would be much better. In my son's primary school, they go every other week the whole year and I think that brings to the children much more to it with the change of seasons. I do try and integrate the nature around me so we do take them out to see what has changed and take it all in but if it was longer time it might bigger, those changes.
Is there anything you would in the FSA?
Ya. The FSA I love the principles and I really try hard to guide my work with it. I think the problem is because there is no reinforcement of it and as an organisation they do not stand up and say that this is but it is quite hard because we are made up of so many different individuals. I think there is really discrepancy is practice and I think what people are offering and what they are taking out to the woods to use and how they using the woodlands. I don't think ideal is the best but I think we should stick to the principles. There is no reinforcement of it. We don't need an ofsted which what teachers have. It is very hard to say what to do but FS quite often just back and watch us on FB all time arguing about what someone is practising what they should and why they shouldn't be asking those questions. That reinforcement is not there. But the conference they do is very inspiring. It's great to be around like minded people. And I guess there are benefits of being a member. So much they could do but they say they do not have money to do it.
Why did you choose to become an FS practitioner?
My children went to kindergarten based on Steiner philosophy and lot of their time was spending outdoors throughout the different weathers. And saw how much that helped them and it was very child-led and not based on having them to do this activity and that activity. It was completely based on their imagination. I just thought it was amazing and I liked that. And then a friend of mine was training to be a FS leader and I was part of a pilot and that just kind of put me in. I think I was one of those aren't volunteers who was more interested than just playing it. My children were interested but once you do it yourself and it is experiential and it just hit me. It was letting someone else muddy and filth playing and they are just hooked into it. So other people influenced me.
What in your opinion what is the relationship between outdoor learning and formal curriculum based education?
I think both of the two very much complement each other. You can reinforce so much of what takes place in the classroom outside the classroom. I think it is really

important to have and it should be important part of the curriculum. Anything that can be measured inside can be measured outside. Every subject can be done outside it gives a different perspective. I think it allows the teachers to be more creative, it allows the children to have a breath in. it is a healthy way to be learning, it helps them to think in different ways, all around it helps in different ways and complement each other very much.
Thank you so much [redacted]!

Session with Child F

What is your name?
[redacted]
What year are you in?
Year 3
How old are you?
8
Which school?
[redacted] Primary School
Do you know what forest school is?
It is a place where you come to learn all about the forest and you learn what not to do and why you might harm the environment if you do the things that you are not meant to do.
How often do you go for FS sessions?
I go every Tuesday. But I may miss some sessions if I am ill or if I am going somewhere.
Do you also do FS sessions in school?
No. not usually.
How long have you been going for FS sessions?
I think I started in this spring and I think I have been going ever since.
Do you like learning outside?
Yes. I think it is really fun because then you get to enjoy the sunshine or play in the snow or make shouters when it rains.
Do you follow the rules that you have been taught for FS sessions?
Sometimes.
Do you know what the rules are?
Its x-factor, which is when you see a dog you keep both your hands on your chest. 123 where are you is when you are lost and you are calling for others and they say 123 I am here or we are here, depending on how many there are. And you say 123 where are you and it goes on and on until they find you. And there is also 123 base camp which is when it is end of the session we all come to base camp. But then if there is an emergency or something they have to come back to the basecamp quickly because nobody's really allowed to bring a watch here in case they lose it. You really do not know the time so you basically just come to base camp whenever you hear that. The other rule is no picking no licking. Which means you are not allowed to pick anything unless it is off the ground. If you are doing a project, then that's only you are allowed to pick stuff off the ground but you are also allowed to pick up twigs or stuff like that. And there is also safety sweep which is when we all look for dangerous things and then we are allowed to play. And I am not sure if I can remember any of the others because there is quite a lot.
What are these dangerous things that you need to look for?

You need to check look for things like broken trees, broken glass, plastic that could be sharp. Sharp twigs and like lose trees or like I said broken trees.
Do you like these rules?
Yes, but I don't really know why we have the x-factor because If you know the dog then you do not need the x-factor and most dogs are friendly. I think you should do it if you have got no one near them.

Session with Parent B

What's your name?
[redacted]
Your child's name?
[redacted]
What year is he in?
3
And which school is he in?
[redacted] Primary School
Do you know about FS?
I don't know very well. They come in the wood and they explore the nature and they do some activities. They learn, not in the school and I think it good.
Do you volunteer often?
Not often. When I am available.
In a month how many times do you do it?
Actually one in other month.
Do you know how many time Daniel goes to FS in a year?
In a year. I think they do every two weeks, I think. Twice a month.
Do you think it is useful?
For Daniel? Sometimes he come back home and say that he found something. He started when he was in Reception. So it has been few years. He doesn't enjoy every session but he enjoys. When he come back home he learns something. They do in groups so they learn. I think it is a good experience.
I was going to ask that does he come home and talk about it?
Ya. Not every time. But sometime he does.
Have you noticed when are the times he comes home and talks about it?
He doesn't say about the activity. He mentioned about the mushroom. He found mushroom and that kind of thing that you are not really see when you are not really coming out. I was really happy. He knew where the mushroom was and he wanted me to see. Then one day, one weekend, may be last year actually, he asked can we just come here. We bring biscuit, we bring hot chocolate, and can we do FS? His younger brother does this as well. He is year one. They knew exactly where they were going. And then they led us, me and my husband, we came here we had hot chocolate and biscuit. That was real fun. They showed what they built with logs and that kind of things.
Do you think Daniel's behaviour or character has improved because of FS? Would you be able to say that?
I can't say that. May be affected in a way. I can't tell significantly because of this.
Has it any impact on his school work?
May be when they do Science. May be. I can't really see.
So you think it is important for Daniel to do FS sessions?

I can't say it is important but it helps a lot. Rather than sitting in class the whole day they come out and learn by experience. It's not from text books. I think it helps but if you say it is important I don't know.
Do you know FS sessions unlike other outdoor sessions is very child-led? Children can decide what they want to do. Do you it is good?
I think it is good. They learn by being independent. They decide what they want to do. I found sometime they like led by other teacher, okay today you two be the leader. And they were very happy. I think that gives them confidence and independence. I think it is good.
And my final question is, so in your opinion what is the difference between and FS?
Outdoor is playground, playtime. This is different. They know what to do. It is not free playtime, so it is different. I am sure they get something from it.
Thank you so much.

Session with Teacher B

Your name please?
[redacted]. I am the class teacher for class 3op
Which school?
For [redacted] Primary School.
Number of students in your class?
So we have got 27 children in the class.
And number of students who go to fs per session?
So per session is 13 or 14. So it is spilt down in the middle half and half.
How long have you been a teacher in this school?
So, I have been teaching here for four years and I was trained a year before, party here.
Do you know FS is and in your opinion what it is?
Yes, FS is outdoor learning. Getting out into the woods to do different structured activities, learning about nature, importance of sustainability, learning about different types of I suppose like survival techniques, living out in the woods, how to have a safe environment, how to utilise it properly. And I think the last couple years in year 3 we have doing fs where Maggie and Janine have been basing around our topics. They have had a roman themed month and they have had a dinosaur and archaeologist based topic where they have made pottery artifacts and thinks like that. It's about utilising the woods, getting outside and take part in outdoor learning.
How much time is allocated for your students per term for FS?
So in year 3 they have done it during the summer term. They have ad one session every fortnight and the session lasts for about 3 hours. 9 till 12. 12.30.
Since only half the class is out for FS, how do you keep other half occupied?
So I decided to set up on the ability. So there is a higher ability and a lower ability group just for teaching. So when one group is at fs, the other group is doing structured lessons math and English, extra tuition to help focus on the area they need to work on.
And what do you do when the higher ability group is in the class?
Again they get something to help push them.
How do you decide what activities appropriate for the children?
So I think you know based on if it's higher group or the lower ability group they have structured Maths or English and garden reading, so we carry on with the same timetable. So we carry on with the same timetable for the same three lessons they

would any way in the morning but it may be in a more you know appropriate stretching or catching up lesson.
Basically say if you have English, Maths and Science carry on but then you will have different set of..
The following week they will do the same sort of lesson but with a more of a focus with what they need. It might be full stops or sub-clauses or something.
Interesting. Do you find it difficult though like for planning?
No, I quite like it. I quite enjoy only having only half the class in then we can give more focus, support, more structure. And you know makes it no harder or easy because you are still planning a lesson.
Do you perceive FS as an important aspect of school curriculum?
Ya, definitely in [redacted] Primary School it is a very important part of our school's ethos. It's being green, its outdoor learning and in a city school we are surrounded by the woods so children, not all children but quite a few children don't get access even though they live on the doorsteps to the woods so this there opportunity within school to get outdoors. It is important to go back to see the nature and to learn from being outdoors.
But how would you connect that to the formal school curriculum?
I think they are learning a variety of skills like team work, leadership, following instructions, good behaviour. They are learning how to do other things such as tying knots or how to avoid certain poisonous plants and vegetables which are life skills they need to pick up somewhere.
Do you find any changes in your children that you attribute it to FS?
I think generally when they come back they are quite they are full of beams, they are happy, they enjoy going. And they have also always have got something to share with the rest of the class what they been doing. I would say builds their confidence, builds their class team-work and working together.
Have you ever seen during the school work referring to something that has happened in the FS?
I must say I have not really seen that. Occasionally they might make a comment in the afternoon 'oh we made medallions or had to work together to make a water boat' or something. But I have not seen it in a reference in any work.
Okay. How receptive is the school towards FS?
Yup. The school is very receptive to it. We have leader for outdoor learning who in charge for FS and they do take part in their structured programme form the early years, year 1, 2 and year 3.
How receptive are the parents?
So, we did have a challenge with year 3. So it is very much imbedded in the early years, 1 and 2. Both the times we have done in the year 3. Half the parents were questioning the validity of it. Why are they doing it? Why are they going outdoors? But they were won over after few weeks. Janine showed the photos of what they were doing and explained the activities and no one complaints after the first week or two.
What were the general comments by the parents when they opposed it?
They would say always you know it's a waste of time, they are not doing structured classroom lessons, who is going to be running it, are they qualified for what the children are actually learning.
What is in your opinion on outdoor learning in relation to the formal curriculum? Is it beneficial, in what ways?

Ya, definitely. It has got its place within the broader education system. So getting out in the woods once in a fortnight is great for, as I said, building teamwork, leadership, getting outdoors, learning about sustainable living and environmental rather than just that sort of office life.
How does fs link to the formal school curriculum, as in, in the sense, here? Do you feel that there is some sort of link?
Yes. As I said the topic often link to FS so if we are doing the Romans, for example they made pottery coins and Roman coins, they have made aqueducts. For the Early Dinosaur ages and Archaeologists, they made bow and arrow and went hunting. So they all link to the topics, inspired from the topics.
So basically do you sit with Janine at some point and…
She sends the ideas and I would have a look though. But she would devise them herself.
Okay. But then who informs her about the topic?
I let her know ahead of the topic. And they quite embedded across the curriculum.
When does she come to know?
Ya, may be two weeks before the topic she would ask me. Her child was in Year 3 last year so she knows it.
What are your thoughts on fs being largely child-led? Which is like subject led but its..
Ya. It is child-led to some extent but then Janine and Maggie come with structured activities. They are following the programme really. The children go often and explore and they come up with their own ways of solving the problem or game but it is still adult-led.
Okay. In your opinion do you think there is a relation between outdoor learning and formal education which happens within the classroom?
Yes. I would say that there is a link. As I said brings in things like the team-work, leadership, the life of sustainability and nature and that is an important part of the classroom. Just like many other parts like the formal PE lessons with in school or taking part in science and history. It's just one facet of children's learning.
So how would say. Because school curriculum and subject based learning is very curriculum based. You need to finish x amount of work…
I would say it isn't too different. It is very structured, the fs, what I have seen. It is a structured programme led by an adult with the children carrying out different activities that is topic related.
Ya. Thank you very much.

Appendix 3: Field notes (2 samples)

Participant observation 30.03.2017

Start from school- 9:20, buddy system, 12 students (Year 3), 1 practitioner, 1 teacher, 2 parent volunteers
Revising the rules at the woodland and landmarks
Collecting clay and climbing trees
Marking danger with red flags
First activity- tight rope walking
Break time- 10:30, washing hands with soap and water, fruits and biscuits provided by practitioner and parents
Second activity- making clay masks on trees
Some children continued playing, making dens
End of session: 12:30, children and practitioners in a circle discussing the activities and experiences

Participant observation 20.06.2017

Students arrive at the center- 16:00, change of clothes, 13 students, 1 practitioner, 1 trainee practitioner
Arrive at the woodland- 16:35, go over rules, playing
I autistic child- likes to make dens
Some children make new base camp under trees for shelter from rains
Discuss carrying large logs (problem solving?)
Do you like FS? - Yes. Explore, fun, cool
End of session 17:30, fruits, biscuits and water provided by the practitioner
Walk back to the center, arrive at 18:15